BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads, and Drains at Telecom Layout in ward No 05 Jakkur, Byatarayanapura Sub Division.

Est Cost: =30.0Lakh

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Telecom Layout								
	3rd Cross		2	295.00	0.45	0.20	53.10		
	4th Cross		2	300.00	0.45	0.20	54.00		
	6th Cross		2	310.00	0.45	0.25	69.75		
							176.85	186.92	**33056.80**
2	KSRRB M300-52.2. Scarifying Existing Bituminous surface to a depth of 50mm by Mechanical Means. Scarifying the existing bituminous road surface to a depth of 50mm and disposal of scarified material and complete as per specifications. MORTH Specification No. 305.4.3 (P.No.148, I.No.19.59 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Telecom Layout								
	3rd Cross		1	172.00	5.00		860.00		
			2	123.00	0.80		196.80		
	4th Cross		1	180.00	5.00		900.00		
			2	120.00	0.90		216.00		
	6th Cross		1	180.00	5.00		900.00		
			1	130.00	0.80		104.00		
							3176.80	7.71	**24493.13**
3	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	Telecom Layout								
	3rd Cross		1	172.00	5.00	0.20	172.00		
			2	123.00	0.80	0.20	39.36		
	4th Cross		1	180.00	5.00	0.20	180.00		
			2	120.00	0.90	0.20	43.20		
	6th Cross		1	180.00	5.00	0.20	180.00		
			1	130.00	0.80	0.20	20.80		
							635.36	1768.08	**1123367.31**
4	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Telecom Layout								
	3rd Cross		1	172.00	5.00	--	860.00		
			2	123.00	0.80	--	196.80		
	4th Cross		1	180.00	5.00	--	900.00		
			2	120.00	0.90	--	216.00		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
	6th Cross		1	180.00	5.00	--	900.00		
			1	130.00	0.80	--	104.00		
							3176.80	29.68	**94287.42**
5	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	3rd Cross		1	295.00	5.00	--	1475.00		
	4th Cross		1	300.00	5.00	--	1500.00		
	6th Cross		1	310.00	5.00	--	1550.00		
							4525.00		
	Deduct prime coat						-3176.80		
							1348.20	3.18	**4287.28**
6	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	For Laying BC	Sqm							
	Road Portion								
	3rd Cross		1	295.00	5.00	--	1475.00		
	4th Cross		1	300.00	5.00	--	1500.00		
	6th Cross		1	310.00	5.00	--	1550.00		
							4525.00	12.72	**57558.00**
7	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	For Laying BC	Cum							
	Road Portion								
	3rd Cross		1	295.00	5.00	0.04	59.00		
	4th Cross		1	300.00	5.00	0.04	60.00		
	6th Cross		1	310.00	5.00	0.04	62.00		
							181.00	8013.60	**1450461.60**
8	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Edge line	Sqm	2	905.00	0.10	--	181.00		
							181.00	542.72	**98232.32**
							Total Construction Cost		**28?5743.860**
9	Add cost of **Waste Plastic** @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	**2041.68**	27.00	**55125.00**
	Waste = 181 X 141 X 8 / 100 = 2041.68								
10							**Cost towards Preparation of DPR LS**		**28858.00**
11							**Cost towards PMC / Third Party inspection LS**		**28858.00**
								Sub Total	**2998584.86**
12							**Miscellaneous and rounding off**		**1415.14**
								Total	**3000000.00**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
Certificate.									
1	The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.								
2	The provisions made in the estimate are necessary and essential.								
3	The workspot was inspected and work is found to be necessary.								
4	The area comes within the Bruhat Bangalore Mahanagara Palike limits.								
For Tejus Consultants									
Assistant Engineer ಸಹಾಯಕ ಅಭಿಯಂತರರು ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ	Assistant Executive Engineer ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24						Executive Engineer		

KEY MAP – 1. TELECOM LAYOUT

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads, and Drains from Railway Level Cross to Srirampura in ward No 05 Jakkur, Byatarayanapura Sub Division.

Est Cost: =50.0Lakh

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Sri Rampura Railway Level Cross								
	Railway Level Cross to Main Road Connecting Rd		2	520.00	0.60	0.30	187.20		
	Telecom Layout 1st cross		2	295.00	0.60	0.30	106.20		
	Culverts		2	9.00	2.30	1.65	68.31		
							361.71	186.92	**67610.83**
2	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	Bed Concrete	Cum							
	Culverts		2	9.00	2.30	0.15	6.21		
							6.21	5348.76	**33215.80**
3	KSRB 5.2-3: Providing and constructing granite size stone masonry in foundation cement mortor 1:6, stone hammered dressed in courses not less than 20cms high, bond stones at 2m. apart in each course including cost of materaials, labour, curing complete as per specifications. Specifcation No. KBS 5.1.13. (P.No.23, I.No.5.6 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Cum							
	Culverts		4	9.00	0.60	1.50	32.40		
							32.40	4438.22	**143798.33**
4	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (P.No.113, I.No.15.1 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Sqm							
	Culverts		4	9.00	--	1.50	54.00		
							54.00	102.82	**5552.28**
5	KSRB 4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.6 of PW,P&IWTD S.R 2016-17)								
	Coping	Cum							
	Culverts		4	9.00	0.60	0.10	2.16		
							2.16	5767.46	**12457.71**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
6	Providing and fixing **RCC Precast cover slab of 250mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Cover Slab	Sqm							
	Culverts		2	9.00	2.10	--	37.80		
							37.80	5317.00	**200982.60**
7	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Sri Rampura Railway Level Cross								
	Railway Level Cross to Main Road Connecting Rd		1	185.00	7.50	0.25	346.88		
	UGD Restoration		2	335.00	1.50	0.25	251.25		
	Bad Reaches		3	2.00	1.80	0.25	2.70		
			6	1.20	1.50	0.25	2.70		
							603.53	148.76	**89780.38**
8	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	Sri Rampura Railway Level Cross								
	Railway Level Cross to Main Road Connecting Rd		1	185.00	7.50	0.23	319.13		
	UGD Restoration		2	335.00	1.50	0.23	231.15		
	Bad Reaches		3	2.00	1.80	0.23	2.48		
			6	1.20	1.50	0.23	2.48		
							555.24	1768.08	**981714.04**
9	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Sri Rampura Railway Level Cross								
	Railway Level Cross to Main Road Connecting R		1	185.00	7.50	--	1387.50		
	UGD Restoration		2	335.00	1.50	--	1005.00		
	Bad Reaches		3	2.00	1.80	--	10.80		
			6	1.20	1.50	--	10.80		
							2414.10	29.68	**71650.49**
10	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Railway Level Cross to Main Road Connecting R		1	520.00	7.50	--	3900.00		
	Telecom Layout 1st cross		1	295.00	4.20	--	1239.00		
							5139.00		
	Deduct prime coat						-2414.10		
							2724.90	3.18	**8665.18**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m.	m			
11	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	For Laying DBM	Sqm							
	Road Portion								
	Railway Level Cross to Main Road Connecting R		1	520.00	7.50	--	3900.00		
	For Laying BC								
	Road Portion								
	Railway Level Cross to Main Road Connecting R		1	520.00	7.50	--	3900.00		
	Telecom Layout 1st cross		1	295.00	4.20	--	1239.00		
							9039.00	12.72	**114976.08**
12	KSRRB M500-16. Providing and laying dense bituminous macadam 50-75mm compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.162 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Railway Level Cross to Main Road Connecting R		1	520.00	7.50	0.05	195.00		
							195.00	7036.28	**1372074.60**
13	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	For Laying BC	Cum							
	Road Portion								
	Railway Level Cross to Main Road Connecting R		1	520.00	7.50	0.04	156.00		
	Telecom Layout 1st cross		1	295.00	4.20	0.04	49.56		
							205.56	8013.60	**1647275.62**
14	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	edge Line	Sqm	2	815.00	0.10	--	163.00		
							163.00	542.72	**88463.36**
							Total Construction Cost		**4838217.302**
15	Add cost of **Waste Plastic** @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	**2318.72**	27.00	**62605.00**
	Waste = 195.16 X 141 X 8 / 100 = 2201.40								
16							**Cost towards Preparation of DPR LS**		**48383.00**
17							**Cost towards PMC / Third Party inspection LS**		**48383.00**
								Sub Total	**4997588.30**
18							**Miscellaneous and rounding off**		**2411.70**
								Total	**5000000.00**
Certificate.									
1	The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.								

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
2	The provisions made in the estimate are necessary and essential.								
3	The workspot was inspected and work is found to be necessary.								
4	The area comes within the Bruhat Bangalore Mahanagara Palike limits.								

For Tejus Consultants

Assistant Engineer

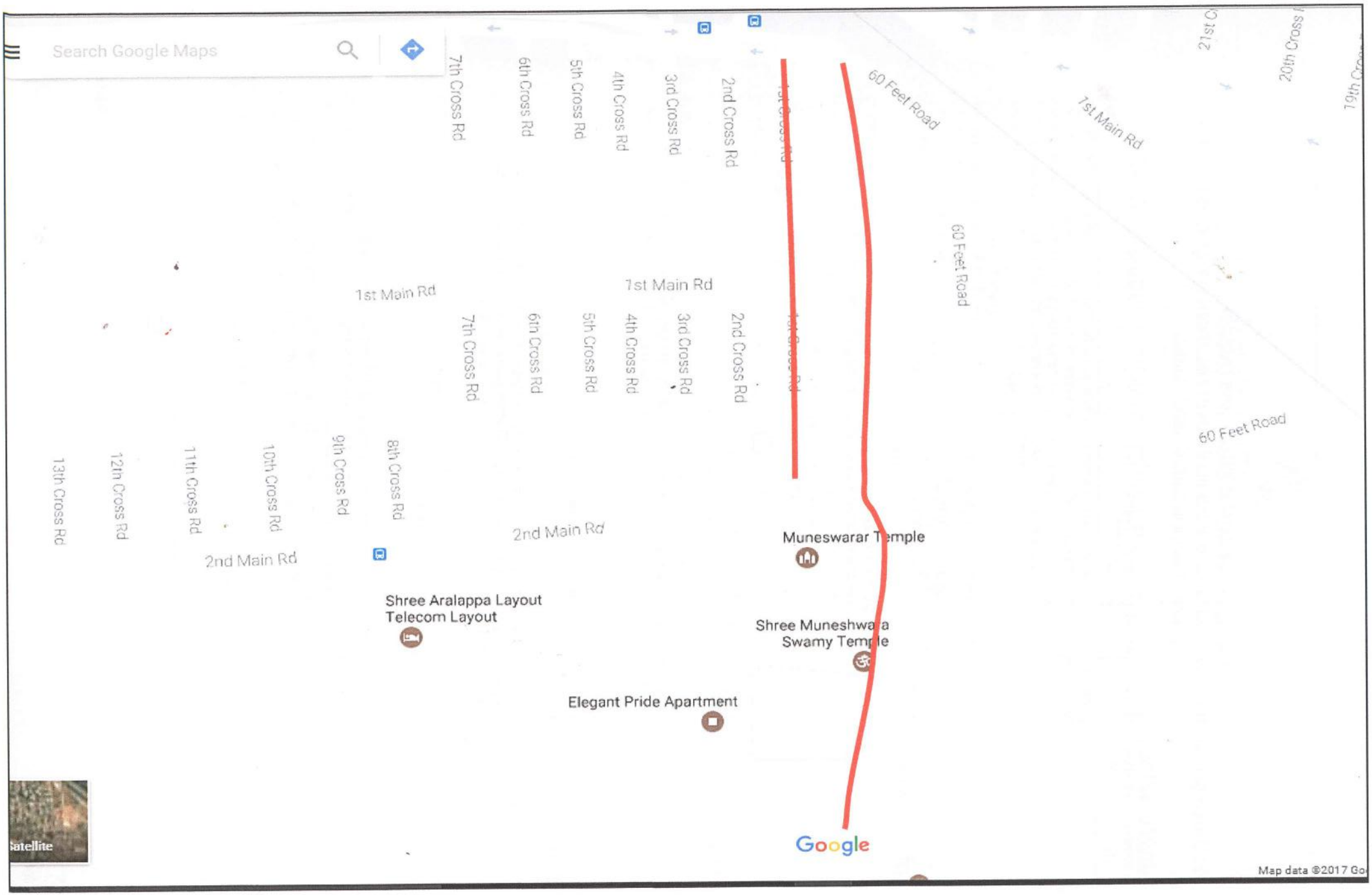
ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

Assistant Executive Engineer

ಸಹಾಯಕ ಕಾರ್ಯ ನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

Executive Engineer

KEY MAP – 2. SRIRAMPURA RAILWAY CROSSING TO SRIRAMPURA MAIN ROAD



KEY MAP – 3. SAMPIGEHALLI OLD POLICE STATION TO JARABANDAMMA TEMPLE

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Roads from Sampigehalli Old Police Station to Jarabandamma Temple in ward No 05 Jakkur, Byatarayanapura Sub Division.

Est Cost: =20.0Lakh

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	New Drain		1	205.00	0.60	0.50	61.50		
	Culverts		1	6.50	2.00	1.05	13.65		
							75.15	186.92	**14047.04**
2	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWTD SR 2016-17)								
	For BS Slab Drain	Sqm							
	New Drain		1	205.00	1.35	--	276.75		
							276.75	665.68	**184226.94**
3	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	Bed Concrete	Cum							
	Culverts		1	6.50	2.00	0.15	1.95		
							1.95	5348.76	**10430.08**
4	KSRB 5.2-3: Providing and constructing granite size stone masonry in foundation cement mortor 1:6, stone hammered dressed in courses not less than 20cms high, bond stones at 2m. apart in each course including cost of materaials, labour, curing complete as per specifications. Specifcation No. KBS 5.1.13. (P.No.23, I.No.5.6 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Cum							
	Culverts		2	6.50	0.60	0.90	7.02		
							7.02	4438.22	**31156.30**
5	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (P.No.113, I.No.15.1 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Sqm							
	Culverts		2	6.50	--	0.90	11.70		
							11.70	102.82	**1202.99**
6	KSRB 4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.6 of PW,P&IWTD S.R 2016-17)								
	Coping	Cum							
	Culverts		2	6.50	0.60	0.10	0.78		

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
							0.78	5767.46	**4498.62**
7	Providing and fixing **RCC Precast cover slab of 250mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Cover Slab	Sqm							
	Culverts		1	6.50	1.80	--	11.70		
							11.70	5317.00	**62208.90**
8	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Jarabandamma Temple Road		1	400.00	5.00	0.15	300.00		
							300.00	148.76	**44628.00**
9	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	Jarabandamma Temple Road		1	400.00	5.00	0.23	460.00		
							460.00	1768.08	**813316.80**
10	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Jarabandamma Temple Road		1	400.00	5.00	--	2000.00		
							2000.00	29.68	**59360.00**
11	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	For Laying BC	Sqm							
	Jarabandamma Temple Road		1	400.00	5.00	--	2000.00		
							2000.00	12.72	**25440.00**
12	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	For Laying BC	Cum							
	Jarabandamma Temple Road		1	400.00	5.00	0.04	80.00		
							80.00	8013.60	**641088.00**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
13	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Centre Line	Sqm	2	400.00	0.10	--	80.00		
							80.00	542.72	**43417.60**
								Total Construction Cost	**1935021.273**
14	Add cost of **Waste Plastic** @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	**902.40**	27.00	**24365.00**
	Waste =80 X 141 X 8 / 100 = 902.40								
15								**Cost towards Preparation of DPR LS**	**19351.00**
16								**Cost towards PMC / Third Party inspection LS**	**19351.00**
17								**Sub Total**	**1998088.27**
								Miscellaneous and rounding off	**1911.73**
								Total	**2000000.00**

Certificate.

1. The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2. The provisions made in the estimate are necessary and essential.
3. The workspot was inspected and work is found to be necessary.
4. The area comes within the Bruhat Bangalore Mahanagara Palike limits.

For Tejus Consultants

Assistant Engineer

ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

Assistant Executive Engineer

ಸಹಾಯಕ ಕಾರ್ಯ ನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvement By Providing Ammenities to Jakkur Lake in Ward No. 5 Jakkur, Byatarayanapura sub division

Est Cost: =40.0Lakh

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	Removing and refixing stone slabs of drains and pointing in CM (1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)								
	Jakkur Lake.	Sqm							
	Jakkur Main Road		1	240.00	1.35		324.00		
			1	160.00	1.35		216.00		
	Consider 10% for Damaged Slabs						-54.00		
							486.00	80.56	**39152.16**
2	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Jakkur								
	Jakkur Main Road		1	240.00	0.45	0.20	21.60		
			1	160.00	0.45	0.20	14.40		
	New Drain								
	Jakkur Main Road		1	80.00	0.50	0.50	20.00		
	Culvert		1	5.00	2.00	1.05	10.50		
							66.50	186.92	**12430.18**
3	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWTD SR 2016-17)								
	For BS Slab Drain	Sqm							
	Jakkur Main Road		1	80.00	1.35		108.00		
	Consider 10% for Damaged Slabs						54.00		
							162.00	665.68	**107840.16**
4	KSRRB M400-Construction of Median and island with Soil taken from Borrow Areas. KSRRB M400-19. Construction of Median and island with Soil taken from Borrow Areas. Construction of Median and island above road level with approved material deposited from borrowpits, spread, sloped and compacted as per Clause 400.7 complete as per specifications. MORTH Specification No. 407(P.No.158, I.No.20.20 of PW,P&IWTD S.R 2016-17)								
	Foot Path	Cum							
	Jakkur Lake Bund Road		1	730.00	3.80	0.075	208.05		
							208.05	208.82	**43445.00**
5	KSRB 14.6-1: Providing and laying heavy duty cobble stones 60mm thick interlock pavers, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. Specification No. KBS. (P.No. 101, I.No. 14.6 of CSR 2016-17)								
	SSM Wall	Sqm							
	Jakkur Lake Bund Road		1	730.00	3.80		2774.00		
							2774.00	966.72	**2681681.28**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
6	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	Bed Concrete	Cum							
	Culvert		1	5.00	2.00	0.15	1.50		
							1.50	5348.76	**8023.14**
7	KSRB 5.2-3: Providing and constructing granite size stone masonry in foundation cement mortor 1:6, stone hammered dressed in courses not less than 20cms high, bond stones at 2m. apart in each course including cost of materaials, labour, curing complete as per specifications. Specifcation No. KBS 5.1.13. (P.No.23, I.No.5.6 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Cum							
	Culvert		2	5.00	0.60	0.90	5.40		
							5.40	4438.22	**23966.39**
8	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (P.No.113, I.No.15.1 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Sqm							
	Culvert		2	5.00	--	0.90	9.00		
							9.00	102.82	**925.38**
10	KSRB 4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.6 of PW,P&IWTD S.R 2016-17)								
	Coping	Cum							
	Culvert		2	5.00	0.60	0.100	0.60		
							0.60	5767.46	**3460.48**
12	Providing and fixing **RCC Precast cover slab of 250mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Cover Slab	Sqm							
	Culvert		1	5.00	1.80	--	9.00		
							9.00	5317.00	**47853.00**
13	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Bad Reaches								
			5	2.50	2.00	0.25	6.25		
			6	1.80	1.50	0.25	4.05		
			1	25.00	5.00	0.20	25.00		
			1	30.00	5.00	0.20	30.00		
							65.30	148.76	**9714.03**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
14	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	Bad Reaches								
			5	2.50	2.00	0.23	5.75		
			6	1.80	1.50	0.23	3.73		
			1	25.00	5.00	0.23	28.75		
			1	30.00	5.00	0.23	34.50		
							72.73	1768.08	**128585.39**
15	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Bad Reaches								
			5	2.50	2.00	--	25.00		
			6	1.80	1.50	--	16.20		
			1	25.00	5.00	--	125.00		
			1	30.00	5.00	--	150.00		
							316.20	29.68	**9384.82**
16	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Jakkur Main Road		1	240.00	5.80	--	1392.00		
			1	25.00	5.00	--	125.00		
			1	30.00	5.00	--	150.00		
							1667.00		
	Deduct prime coat						-316.20		
							1350.80	3.18	**4295.54**
17	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	For Laying DBM for Bad Reaches	Sqm							
	Jakkur Main Road		5	2.50	2.00	--	25.00		
			6	1.80	1.50	--	16.20		
			1	100.00	1.40	--	140.00		
	For Laying BC								
	Jakkur Main Road		1	240.00	5.80	--	1392.00		
			1	25.00	5.00	--	125.00		
			1	30.00	5.00	--	150.00		
							1848.20	12.72	**23509.10**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
18	KSRRB M500-16. Providing and laying dense bituminous macadam 50-75mm compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.162 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)								
	For Laying DBM for Bad Reaches	Cum							
	Jakkur Main Road		5.00	2.50	2.00	0.05	1.25		
			6.00	1.80	1.50	0.05	0.81		
			1.00	100.00	1.40	0.05	7.00		
							9.06	7036.28	**63748.70**
19	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	For Laying BC	Cum							
	Jakkur Main Road		1	240.00	5.80	0.04	55.68		
			1	25.00	5.00	0.04	5.00		
			1	30.00	5.00	0.04	6.00		
							66.68	8013.60	**534346.85**
20	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Centre Line	Sqm	2	295.00	0.10	--	59.00		
							59.00	542.72	**32020.48**
21	Providing and making precast seating arrangement including excavation laying pcc M15, providing laying M20 concrete for pedestal and seating slab, fixing of seating slab including all necessary bolt and nuts etc, complete and as per the directions of Engineer in-Charge. (Data Rate)								
	Seating Benches	Each	12	--	--	--	12.00		
							12.00	10510.00	**126120.00**
							Total Construction Cost		**3900502.074**
22	Add cost of **Waste Plastic** @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	**752.15**	27.00	**20308.00**
	Waste = 59.00 X 141 X 8 / 100 = 752.15								
23							**Cost towards Preparation of DPR LS**		**39006.00**
24							**Cost towards PMC / Third Party inspection LS**		**39006.00**
								Sub Total	**3998822.07**
25							**Miscellaneous and rounding off**		**1177.93**
								Total	**4000000.00**

Certificate.

1. The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2. The provisions made in the estimate are necessary and essential.
3. The workspot was inspected and work is found to be necessary.
4. The area comes within the Bruhat Bangalore Mahanagara Palike limits.

For Tejus Consultants

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			

Assistant Engineer
ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

Assistant Executive Engineer
ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ /
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-26

Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Construction of RO water purifier plant in Agrahara Layout, Kogilu Layout, Kattigenahallu, Agrahara Village, Basavalingappa Nagar, Jakkur Village in ward no. 05 Jakkur, Byatarayanapura sub division.

Est Cost: =105.0Lakh

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Hand pump, MWS of P.W.S.S by vertical electrical sounding by adopting Venner or Schlumberger's method, including reconnaissance survey of geological formation, Gerophysical investigation of existing Ground Wate in the vicinity, its qualityf 1.0 meter in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instrument and accessories to work site., engaging techinical personal and labour required etc., as per Specification and direction (P.48, I. 9.4) PRED.SR 2012-13	Each BW							
			7				7	1882.00	13174.0
2	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13	Rmtr							
	0 to 50 m		7	50.00			350.00	306.00	107100.0
	50 to 100 m		7	50.00			350.00	400.00	140000.0
	100 to 150 m		7	50.00			350.00	445.00	155750.0
	150 to 200 m		7	50.00			350.00	470.00	164500.0
	200 to 250 m		7.	50.00			350.00	544.00	190400.0
3	Supply of ISI mark 175 mm nominal bore, Plain end steel casing pipe - grade of Steel Fee 410 of wall thickness 5.4mm thick confirming to IS 4270:2001 and latest amendments, electric resistance welded steel tube material and confirming to IS 1387/1993 and manufactured by baseic open hearth electric or basic oxygen process in random length of 5 to 7 mts both ends threaded confirming tio IS 554/1985, one end fixied with socket confirming to IS 4270:2001 and the other end with screwed pipes ISI Marking weighing 25.10Kg/mtr (Inclusive of all taxes and durties) Prices include Collar-medium duty P. iii, I No. 84 PRED SR 2012-13	Rmtr							
			7	50.00			350.00	1325.00	463750.0
4	Providing 250mm dia PVC Pipe 6kg/cm SE PRED Approved Rate	Rmtr							
			7	18.00			126.00	754.47	95063.0
5	Providing and fixing 160mm Borewell Cap P. iii, I No. 85	Each							
			7.				7	100.00	700.0

6	Supply and delivery at site brand New texmo/ innoval/ Lubi/ Sabar / Atalanta/ Calamal/ make suitable for vertical installation in 150mm dia bore well comprising of single stage or multistage CF pump close coupled by measns of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water (Wet type) squirrel cage submer''ble induction motor suitable for opertation of 3PH., 50 Hz, 380/440 volts AC supply fitted with required aqccessories such as suction, casing suction strainers sand guard Non return value etc. complete . The pump and motor shall form an integral unit with all the required fittings 12.50 HP 25 stage. ATALANTA< SUGNA< CRI, KIRLOSKAR and other Equivalent Pumps PWD SR 2016-17 P. XXXXII Item No. 24 including of all taxes	No							
	12.5 HP 25 Stage		7				7	60400	422800.0
7	Supplying of ISI marked galvanized mild steel tube (continously welded electric resistance welded (ERW) high frequency, induction welded (HFIW) Hot finished welded type of nominal bore given below screwed at both ends as per IS 554/1986 with latest amendments, pipes threaftes at one end and the other end protected asper specification in random lengths of 4 to 7 mtrs Confirming to IS 1239 part I/1990 with amendament 1-5 and with all its latest amendements if any. The pipes supplied should be with BIS mark No 3/08-09 2406/15.10.2008	Rmtr							
			7	250.00			1750.00	375.00	656250.0
8	Heavy Duty Collar 50 mm dia	Nos	308				308	130.00	40040.0
9	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper with low resistance conductor confirming to table 3 class 5 of IS:8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto 1100Volts as per IS-694:1990 & confirming to GTP of GROUP-A. P. No. 12 / I No. 2.10.4(1) 3C x 6 Sqm mm KPWD Electrical SR 2014-15	Mtr							
			14	255.00			3570.00	188.70	673659.0
10	Erection of pumpset including aligning and balancing with all necessary erection materials and labour including supply and erection of one pair supporting clamps, one borewell cap. Cable clips with bolts, nuts, valves guages etc., involoved in the job (Necessary GI pipe and specials with be supplied by the board at the site free of cost) (As per rate approved KUWS & DB for year 2008-09	No							
			7				7	3000.00	21000.0
11	Supplying and fixing 20"x20"x2.5" polished wood board made of not less than 15mm thick plank on both sides with planks made out of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws etc., P No. 44 / I No. 6.6.6 KPWD Electrical SR 2014-15	Each							
			7				7	302.00	2114.0

12	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A P No. 55/ . No. 7.4.4 4 core 16 Sqmm KPWD Electrical SR 2014-15	Mtr							
			7	30.00			210.00	140.40	29484.0
13	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.In existing trench/duct. P No. 61 / I No. 7.8.1 6Sqmm to 16 Sqmm) KPWD Electrical SR 2014-15	Mtr							
			7	30.00			210.00	10.80	2268.0
14	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) P No. 61 / I. No. 7.9.3 KPWD Electrical SR 2014-15	Mtr							
	For Cutting Road Surface		7	25.00			175.00	85.00	14875.0
15	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV P. No. 62 / I No. 7.12.1 KPWD Electrical SR 2014-15	Mtr							
	40mm dia GI pipe		7	4.00			28.00	345.00	9660.0
16	2727	No.							
	16Sqmm		7				7.00	280.00	1960.0
17	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia, (P No. 55, I No. 7.1) KPWD Electrical SR 2014-15	No							
			7				7	2727.00	19089.0
18	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers.P No. 44 / I No. 6.7.2 KPWD Electrical SR 2014-15	No.							
	32 Amps		42				42	180.00	7560.0
19	KSRB 13-7.1-4: Providing and fixing in position 50mm nominal bore gun metal non-return valve horizontal type of approved make including cost of all materials, labour and HOM of equipments with all leads complete as per specifications NO KBS 13.2.16 / 13.13 Page No. 93 Item No. 13.55 / PWD SR 2016-17	Nos							
			7				7	1615.68	11310.0
	Basic Rate	1496.00							
	Area Weightage @ 8%	119.68							
	Total	1615.68							
20	Providing NP/CP waste unions conforming to ISI specifications and fixing them in position as per directions including cost of materials, fixtures and conveyance to work spot etc., complete. P. No. 95 / I. No. 13.81.3 PWD SR 2016-7	No							
	50mm dia		7				7	232.20	1625.0
	Basic Rate	215.00							

	Area Weightage @ 8%	17.20							
	Total	232.20							
21	Supplying and fixing 50mm dia GI X nipple with ISI mark with all lead and lift loading unloading and labour charges etc complete	No							
			7	4.00			28	80.00	2240.0
22	Supplying shunt capaitors conforming to IS 2834, 3phase 400/440 volts grade for power factor improvement of rotating machinery, Capacitor in KVAR rating Nos. 2KVAR capacity with all lead and lift =, loading, unloading and labour charges etc complete as per specifications	No							
			7				7	350.00	2450.0
23	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 5-32Amps TPN P No. 47 / I No.6.16.5 KPWD SR 2014-15	No							
			7				7	1547.00	10829.0
24	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of red oxide primer paint and finally finished with approved colour enameled metal paint etc., complete P.No. 49, I. No. 6.40.2 KPWD Electrical SR 2014-15	Sq.Cm							
	16SWG		14	120.00	60.00		100800		
			7	300.00	25.00		52500		
							153300	0.33	50589.0
25	Supplying and delivery at site brand new star / Essen/ Lotus/Sun-shines/Adarsh/ GK Controls best indigenous make combined energy meter - cum- control panel board unit of size 600x450 x200 mm minimum mechanically strong vermin and water proof. The unit shall have two detachable doors suitable for operation on 3 ph, 50Hz, 380/440 volts, A.C supply with spring loaded latch, locking device with a key ribs should be provided inside the door, canopy apron and louvers ventilators shall be provided. the combined energy meter cum- control panel board unit suitable for operation. The panel board shall be fabricated on single unit in the above components for suitable pumpset. 12.5HP to 15 HP Star Delta Starter SERDED Rate	No.							
			7				7	11000	77000.0
26	Earthwork excavation for pipeline trenches including deporiting or bank up to a lead of 50 mtrs including shiriry and statting danger lighting and using site rails and boming poles at every 100 mtrs wherever necessary as directed in th following strructure manhole. Page No. 01/ Item No.1.2.2 / PRED SR 2012-13 Hard Soil	Cum							
			7	60.00	0.60	0.75	189.00		
							189.00	188.00	35532.0
	Basic Rate	188.00							

27	Providing and instalation at site of works P.V.C.Pipes including cost of pipes and specials and incluidng lowring into trenches, laying true to line, level and perfect linking at joints, leak proof including jointing encasing the pipe alround to a depth Not less than 15cm with grave or selected earth avalabile from the execavation Etc., Page No.15 item No.3.4.2 b PRED SR 2012-13.	Rmtr							
	75 mm dia 6 KSC PVC pipe		7	60.00			420.00		
							420.00	157.00	65940.0
28	Refilling the basement and pipeline treanches with secleted available earthe for trench excavation including authority condition in layers from thedi including disponsary of the sunplus earth with a heavy 200 mtrs Page No. 3 / Item No. 1.6 / PRED SR 2012-13	Cum							
				Qty. Vide Item No. 27			189.00	61.00	11529.0
	Basic Rate	61.00							
29	KSRB 13.6.3-6 : Providing and fixing in position brass gate valve with C.I wheel of approved quality (screwed end) 50mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. Specification No. KBS 13.2.6/13.3 P. 92 / I.13.37 PWD SR - 2016-17	Each							
			14				14	2216.16	31026.0
	Basic Rate	2052.00							
	Area Weightage @ 8%	164.16							
	Total	2216.16							
	ROOM FOR RO PLANT								
30	KSRB 2-2.2 : Earth work excavation for foundation of buildings, culverts water supply, sanitary line and electrical conduits either in pits or in trenches 1.5m and above in width, in Hard soil not exceeding 1.5m, in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m, after breaking of clods complete as per specifications, specification, No, KBS 2.1(a) / 2.3.5, Page No. 5 / Item No. 2.3/ PWD SR 2016-17	Cum							
	Centre Line	7	1	18.40	0.90	0.80	92.73		
	Columns	7	4	1.50	1.50	1.20	75.60		
							168.33		
							168.33	204.12	34360.0
	Basic Rate	189.00							
	Area Weightage @ 8%	15.12							
	Total	204.12							
31	KSRB 4-1.3 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180 kgs with 40mm and down size graded granite metal coarse aggregates @ 0.85cum and fine aggregares @ 0.57 cum machine mixed, concrete laid in layers not, exceeding 15cms, thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1,4.2. No. 12/ Item No. 4.3/ PWD SR 2016-17	Cum							
	Wall Portion	7	1	18.40	0.90	0.15	17.38		
		7	4	1.50	1.50	0.15	9.45		
	For Flooring	7	1	4.70	4.10	0.15	20.23		
							47.06		
							47.06	5256.36	247364.0

	Basic Rate	4867.00							
	Area Weightage @ 8%	389.36							
	Total	5256.36							
32	KSRB 5.2.3 : Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, ' ond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications.KBS 5.1.13 Page No. 23 / Item No. 5.6 / PWD SR 2016-17	Cum							
	Wall Portion	7	1	18.40	0.75	0.60	57.96		
	Deduction for Columns	7	4	1.50	0.75	0.60	-18.90		
							39.06		
							39.06	4521.96	176628.0
	Basic Rate	4187.00							
	Area Weightage @ 8%	334.96							
	Total	4521.96							
33	KSRB 5.3-3 : Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications.KBS 5-1.13 Page No. 23 / Item No. 5.9 / PWD SR 2015-16	Cum							
	Wall Portion	7	1	18.40	0.45	0.45	26.08		
	Deduction for Columns	-7	4	1.50	0.45	0.45	-8.51		
							17.57		
							17.57	5405.40	94973.0
	Basic Rate	5005.00							
	Area Weightage @ 8%	400.40							
	Total	5405.40							
34	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. Specification No. KBS 2.9 (P.6/I.2.10) PWD SR 2016-17	Cum							
				Qty Vide Item No. 30			168.33	137.16	23088.0
	Basic Rate	127.00							
	Area Weightage @ 8%	10.16							
	Total	137.16							
35	KSRB 5-11 : Providing and constructing load bearing wall with solid concrete blocks of size 400x200x200 mm having block density not lessthan 1800 kg/m3 and having a minimum average compressive strength 5.00 N/mm2 confirming to IS 2185 (Part) : 2005 and constructed with CM 1:4 , as per IS 2572:2005 including cost of all materials, labour charegs, scaffolding, curing complete as per specifications. KBS No.5.4. Page No. 25 / Item No. 5.27 / PWD SR 2016-17	Sqm							
	Wall Portion	7	2	5.10		3.00	214.20		
		7	2	4.10		3.00	172.20		
	Parapet Wall	7	2	5.10		0.40	28.56		
		7	2	4.10		0.40	22.96		
	Steps	7	4	4.10		0.10	11.48		
							449.40		
	Deductions RS	7	1	3.04		2.50	53.20		
	V	7	2	0.90		0.60	7.56		
							-60.76		
							388.64		
							388.64	1011.96	393288.0
	Basic Rate	937.00							
	Area Weightage @ 8%	74.96							
	Total	1011.96							

36	KSRB 4.2.2 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320 kgs, with 20mm and down size graded granite metal, coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum with superplastisiser @ 3lts confirming to IS 9103-1999 reaffirmed-2008 machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, staircase, lintels, retaining walls, walls (any thickness) including attached plasters, column, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc, including cost of all materials, labour, HOM of machinery, curing, complete as per specifications. Specification No. KBS 4.1,4.6, No. 13/ Item No. 4.11/ PWD SR 2016-17	Cum							
	Column Footing	7	4	1.20	1.20	0.50	20.16		
		7	4	0.23	0.23	3.80	5.62		
	Plinth Beam	7	1	18.40	0.20	0.20	5.15		
	Lintels	7	1	18.40	0.20	0.15	3.86		
	Roof Slab	7	1	5.55	4.50	0.125	21.85		
							56.64		
							56.64	6491.88	367700.0
	Basic Rate	6011.00							
	Area Weightage @ 8%	480.88							
	Total	6491.88							
37	KSRB 4.2.10 : Providing and laying in position reinforced cement concrete ofmix M20 with OPC cement @ 24kgs, with 12 mm and down size graded granite metal coarse aggregates @ 0.5175 cum and fine aggregates @ 0.345 cum with superplastisiser @ 0.225lts,machine mixed, well compacted for plain chajja of 7.5 cms. average thickness, upto ground floor lever, including cost of all materials, labour, HOM of machinery, curing, complete as per specification. Specification NO. KBS 4.1, 4.6 Page No. 14 / Item No. 4.19 / PWD SR 2016-17	Sqm							
	W	7	1	4.50	0.45		14.17		
							14.17		
							14.17	492.48	6978.0
	Basic Rate	456.00							
	Area Weightage @ 8%	36.48							
	Total	492.48							
38	KSRB 4.9.1: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost pf materials, labour, HOM of machinery complete as per specifications.Specification No. KBS 4.6.3 Page No. 17 / Item No. 4.46.2 / PWD SR 2016-17 - FE 500	Ton							
	For Roof, Columns Beams @ 120 Kg / Cum	1	120.00	56.64			6796.80		
	Chajjas @ 7.5 Kg / sqm	1	7.500	14.17			106.27		
							6903.07		
							6.903	75081.60	518288.0
	Basic Rate	69520.00							
	Area Weightage @ 8%	5561.60							
	Total	75081.60							

39	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth and string courses cost of all materials, labour complete as per specifications. Specification NO KBS 4.6.2 Page No. 15 / Item No. 4.31/ PWD SR 2016-17	Sqm							
	Columns Footing	7	4	4.80		0.50	67.20		
		7	4	0.92		4.00	103.04		
	Plinth	7	1	18.40		0.20	25.76		
	Lintels	7	1	18.40		0.15	19.32		
	Roof	7	1	5.55	4.50		174.82		
	Sides	7	2	5.55		0.15	11.65		
		7	2	4.50		0.15	9.45		
							411.24		
							411.24	316.44	130133.0
	Basic Rate	293.00							
	Area Weightage @ 8%	23.44							
	Total	316							
40	KSRB 4-6.10 : Providing and removing centering, shuttering, strutting, propping etc., for chajjas, corbels etc., including edges including cost of all materials, labour complete as per specifications. Specification NO KBS 4.6.2 Page No. 16 / Item No. 4.37 / PWD SR 2016-17	Sqm							
		7	1	4.50	0.60		18.90		
							18.90		
							18.90	291.60	5511.0
	Basic Rate	270							
	Area Weightage @ 8%	22							
	Total	292							
41	KSRB 15.3.13 : Providing 12mm thick cement plaster in single coat with cement mortar 1:3, to ceiling including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. Page No. 114 / Item No. 15.21 / PWD SR -2016-17	Sqm							
		7	1	4.70	4.10		134.89		
							134.89	208.44	28116.0
	Basic Rate	193							
	Area Weightage @ 8%	15							
	Total	208							
42	KSRB 15.3.11 :Providing 20mm thick cement plaster in single coat with cement mortar 1:4, to stone masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. Page No. 114 / Item No. 15.19 / PWD SR 2016-17 (Inside wall)	Sqm							
	Inside wall	7	2	4.70		3.00	197.40		
		7	2	4.10		3.00	172.20		
							369.60		
	Deductions - For rolling shutter	7	1	3.04		2.50	53.20		
	ventilators	7	2	0.90		0.60	7.56		
							-60.76		
							308.84		
							308.84	252.72	78050.0
	Basic Rate	234							
	Area Weightage @ 8%	19							
	Total	253							
43	KSRB 15-7 : Providing lime rendering for plastering to wall and ceiling, including cost of materials, labour, curing complete as per specifications. (P. 115 / I. 15.33 PWD SR - 2016-17).	Sqm							

			Qty Vide Item No. 14+15				443.73	27.00	11981.0
	Basic Rate	25							
	Area Weightage @ 8%	2							
	Total	27							
44	KSRB 15.3.9: Providing 18mm thick cement plaster in single coat with cement mortar 1:6, to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications Page No. 114 / Item No. 15.17 / PWD SR 2016-17 (Out side Wall)	Sqm							
	Out Side	7	2	5.10		3.45	246.33		
		7	2	4.50		3.45	217.35		
							463.68		
	deduction for RS	7	1	3.04		2.50	53.20		
	V	7	2	0.90		0.60	7.56		
							-60.76		
							402.92		
							402.92	213.84	86160.0
	Basic Rate	198							
	Area Weightage @ 8%	16							
	Total	214							
45	KSRB 15-14.1 : Providing and applying two coats with oil bound washable distemper of approved brand and shade on wall surface including priming coat with distemper primer after thoroughly brooming the surface free from mortar drops and other foregin matter including preparing the surface even and sand paper smooth, cost of materials, labours, complete as per specifications PWD SR 2016-17 (P.117 /I. 15.49.1)	Sqm							
			Qty Vide Item No.13+14				752.57		
							752.57	76.68	57707.0
	Basic Rate	71							
	Area Weightage @ 8%	6							
	Total	77							
46	KSRB 15-16.1: providing and finishing external walls in tow coats with water proof cement paint of approve brand and shade to give an even shade after thourghly brooming the surface to remove all dirt and losse powdered material, free from mortar dops and other foreign matter cost of materials, labours, complete as per specifications PWD SR 2016-17 (P. 118 / I. 15.53.2) with Primer	Cum							
			Qty Vide Item No.16				402.92		
							402.92	90.72	36553.0
	Basic Rate	84							
	Area Weightage @ 8%	7							
	Total	91							
47	KSRB 15-18.2 : Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications. Page No. 121 / Item No. 15.74 / PWD SR 2016-17	Sqm							
	Out Side	2	7	6.04		2.50	237.82		
		7	2	0.90		0.60	7.56		
							245.38		
							245.38	88.56	21731.0
	Basic Rate	82.00							
	Area Weightage @ 8%	6.56							
	Total	88.56							

48	Providing and fixing Special make glazed Vitrified tiles (Granomite finis) of approved make, quality and colour of sized 6000x600x10mm thick fixed on existing flooring wit ha special roffe adhesive for flooring and skirting etc., complete including providing spears at required interval and removing stains etc., complete. Page No. 107 / Item No. 14.43 / PWD SR 2016-17	Sqm							
		7	1	4.70	4.10		134.89		
		7	2	4.70		1.50	98.70		
		7	2	4.10		1.50	86.10		
							319.69		
	Deduction RS	7	1	3.05		1.50	-32.02		
							287.67		
							287.67	1285.20	369713.0
	Basic Rate	1190.00							
	Area Weightage @ 8%	95.20							
	Total	1285.20							
49	Providing and laying/fixing cement base, precast pre polished cement concrete, designer tiles 25mm thick conforming to IS 1237 heavy duty tiles for flooring reads of steps of steps and landin, laid on a bed of 12mm thick cement mortar 1:3 mis finished with flush pointing using white cement, including cost of material,s including cutting, griding the edge ti half/ful rounf wherever requires labour, curing complete as per specification Page No. 109 / Item No. 14.62 / PWD SR 2016-17	Sqm							
		7	4	2.50		0.45	31.50		
							31.50		
							31.50	1171.80	36912.0
	Basic Rate	1085.00							
	Area Weightage @ 8%	86.80							
	Total	1171.80							
50	KSRB 7.7 : Providing and fixing in position in cement concrete 1:3:6 steel glazed windows and ventilators side hung/top hung fully openable as per approved drawings using Z angles of 25x33x3mm, weighing 1.419Kg/m both for outer and inner frames and central mullion section of size 25x46x3mm weighing 2.28Kg/m duly providing T section 19x19x3mm weighing 0.839 kg/m for glazing of windows not more than 34 cms. c to c including providing and fixing 4mm thick reeded glass with teakwood beading of required size, all steel section should confirm to I.S. 7452:1990, 4nos, of holdfasts of approved size section should be cut to length welded and electrically grinded subdividing frames of unit shall be tenonned and revetted into the frames electrically. All the steel surface shall be thoroughly cleaned free of rust and painted with one coat of anti-corosive paint and finishing with two coats of ready mix paint of approved colour and make including cost of materials, fixtures, labour and HOM of machinery complete as per spe	Sqm							
		7	2	0.90		0.60	7.56		
							7.56		
							7.56	3812.40	28822.0
	Basic Rate	3530.00							
	Area Weightage @ 8%	282.40							
	Total	3812.40							

51	KSRB: 7.5 Providing and fixing pull and push type rolling shutters of approved make out of 18 guage, 75mm wide cold rolled steel laths of convex corrugation, with side guides and bottom rail, with interlocking arrangements for steel laths by means of alternate clips, suspension shaft with High tension coil type springs two numbers, mounted on specially designed pipe shaft, with bracket plates, guide channels, ball bearing arrangements, for inside & outside locking with push & operations complete Including pulling hooks, 4nos handles wit hall fittings and accessories, painted with a coat of red lead paint (without top cover) cost of materials, labour, HOM of machinery complete as per specifications. Shutter size 3mx2.8m Specification NO. KBS 7.10 / 7.12 Page No. 31 / Item No. 7.5/ PWD SR 2015-16	Sqm							
		7	1	3.00		2.50	52.50		
							52.50		
							52.50	3090.96	162275.0
	Basic Rate	2862.00							
	Area Weightage @ 8%	228.96							
	Total	3090.96							
52	Providing R.O. Plant								
	Providing revsrse osmosis system to cover 2000 Liters of High TDS water per hour								
	TECHNICAL SPECIFICATIONS								
	Flow Rate:								
	Feed Water : 5000 LPH								
	Treated Water : 3000 LPH								
	Reject Water : 2000 LPH								
A	RAW WATER PUMP								
	Purpose:- To feed the Dual Medial filter at pressure more than 2.00 bars which is min operating pressure for filter?								
B	SAND MEDIA FILTER								
	Purpose:- To remove the total suspendred solids, dirt, iron and reduce silt density index which can foul the members								
C	ACTIVATE CARBON FILTER								
	Purpose:- To remove the total color, smell, odor from the water.								
	Media: Mixed bed sand media consisting of the following i) Gravel ii) Pebbles iii) carbon Average porosity 50 micron particulate size bed depth : 1500 mm pipelines & Accessories : Pipe of PVC 10 Bar tested pressure testing cock & pressure gauges at intlet - outlet of system								
	DOSING SYSTEM								
	Purpose : To dose anti scaling chemical to protect the scaling formation on RO Membranes								
D	MICRON FILTER								
	Purpose : To remove the fine particles ip to 05 microns and reduce silt density levels to acceptable level.								
E	HIGH PRESSURE PUMP								
	Purpose : To feed the reverse Osmosis membrane at pressure more than the osmotic pressure taking into consideration flux rate, flow and recovery								
	RO membrane housing.								
	Purpose : To pack membrane and operate at high pressure.								
	RO MEMBRANES								
	Purpose : To remove the major part of TDS into 98% by Reverse Osmosis Membranes arranged and designed to give adequate flow the Recovery.								

	RO CLEANSING SYSTEM								
F	ELECTRICAL PANEL								
	Purpose : A control panel is provided as a safety measure for the pumps & other electrical items.								
	Specifications a) Complete starters, overload relays, b) Voltmeter, Ammeter, MCB's indicating lights, c) Rocker switches for Dozers, d) incomers, Auto-Manual switches.								
	INSTRUMENTATION								
	Purpose : a) Flow meter : To measure the online flow of water flowtec b) Low pressure switch : To protect RO pump from dry running c) High pressure switch : To protect RO pump from back pressure d) Pressure Gauges : For calculate AP for each unit in RO system								
	PH DOSING SYSTEM								
	Purpose to dose sodium Bi-carbonate for enhances product water SS till the pre-filteration & SS from HPP to thhe premeter line termination point NRV's pressure relief valves, wherever needed the system will be on common SS base frame supply & manufacture of complete Reverse Osmosis plant stainless steel tank (2kl) Raw water tank (5kl) with stainless steel pipe line required for plant erection.	Nos							
		7	1				7.00	515000	3605000.0
	ELECTRIFCATION								
53	Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using 1100V grade, COPPER conductor flexible multistrand FRLS PVC insulated, 2 X1.5Sq.mm Cable confirming to the GTP, with a 6Amps flush type SP control switch shall be fixed on the existing plastic sheet / gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. GROUP A (Page No. 05, Item No.2.1 KPWD SR 2014-15								
	b) Medium point above 3Mtr upto 6Mtr from tapping point to out let via switch	Point	2	7			14.00	245.0	3430.0
	c) Long point above 6Mtr upto 10Mtr from tapping point to out let via switch	Point	2	7			14.00	363.0	5082.0
54	Supplying and flush mounting teak wooden box without front plank, made of not less than 12mm thick wood, after due groove cutting, Finishing with necessary cement plastering complete (Page No. 03, Item No. 1.6) KPWD SR 2014-15								
	(1.6.5) 4"x4"x3" (101x101x76mm)	Each	12	7			84.00	68.0	5712.0
	(1.6.1) 12"x12"x3" (300x300x76mm)	Each	6	7			42.00	116.0	4872.0
	(1.6.3)10"x7"x3" (254x178x76mm)	Each	6	7			42.00	87.0	3654.0
55	Supplying 4mm thick plastic sheet with necessary nitches for fixing switches, regulators etc., and fixing on existing wooden or metal box using N.F. screws. (Page No. 17, Item No. 3.9) KPWD SR 2014-15	SqCM							
			7	6666.66			46667	0.25	11667.0
56	Extra for Groove cutting in brick wall/CC floor to the suitable depth for concealing of Conduit/GI pipe and plastering, finishing upto wall surface complete. upto 50mm conduit in brick wall (Page No. 03, Item No.1.7.1) KPWD SR 2014-15	Mtr							
			7	10			70.00	21.0	1470.0

57	Supplying heavy gauge PVC Conduit Pipe 19/20 mm dia 2 mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering up to the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary. (Page No. 02, Item No. 1.3.1) KPWD SR 2014-15	Mtr							
			7	10			70.00	56.0	3920.0
58	Supplying and fixing PBBC/Bakelite straight or slant batten holder and wiring with 60w/230 volts lamps. (Page No. 20, Item No. 4.2) KPWD SR 2014-15	Each							
			14				14.00	88.0	1232.0
59	Supplying patti type fluorescent tube light fitting of 2' - suitable for 14 watts fluorescent tube fitting, made out of M.S. Sheet and stove enameled with HF Electronic Ballast , locking type brass contact holders mounted on double fold type sheet base fully wired for use on 230 volts AC . Supply including T5 lamp. (Page No. 20, Item No. 4.5) KPWD SR 2014-15	Each							
			28				28.00	591.0	16548.0
60	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand Copper with low conductor resistance single core wire in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP -A 1.5 sqmm (Page No. 06, Item No. 2.5.2) KPWD SR 2014-15	Mtr							
			7	5			35.00	18.6	651.0
61	Supplying and fixing cast Aluminum round or oblong type bulk head fitting with GI wire guard, glass cover with 60/100 watts 230V GLS lamp. (Page No. 20, Item No. 4.3) KPWD SR 2014-15	Each							
			28				28.00	747.0	20916.0

62	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia (Page No. 55, Item No. 7.1) KPWD SR 2014-15	No							
			7				7.00	2727.0	19089.0
								Total Construction Cost	**10150840.000**
63								**Cost towards Preparation of DPR LS**	**101509.00**
64								**Cost towards PMC / Third Party inspection LS**	**101509.00**
65								**Cost towards BESCOM deposite Charges for Borewell LS**	**80000.00**
66								**Cost towards BESCOM deposite Charges for RO Plant LS**	**60000.00**
								Sub Total	**10493858.00**
67								**Miscellaneous and rounding off**	**6142.00**
								Total	**10500000.00**

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Tejus Consultants

Assistant Engineer
ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

Assistant Executive Engineer
ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Construction of Bangalore One Centre Building at Vinayaka Nagar and Agrahara Layout in ward No 05, Jakkur, Byatrayanapura Sub Division.

Est Cost: =20.0Lakh

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	KSRB 2-2.1 : Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5 (Page no -5, item no - 2.3)								
	Bangalore One								
	Footings	2	8	1.30	1.30	1.50	40.56		
	Plinth Beam	2	1	26.70	0.20	0.50	5.34		
	Total Qty	**Cum**					**45.90**	**204.12**	**9369.11**
2	KSRB 2.14-1: Extra for additional lift of 1.5m. or part thereof for excavation In loose / soft or hard soil including cost of materials, labour complete as per specifications. (Page no -7, item no - 2.21)								
	Bangalore One								
	Footings	2	8	1.30	1.30	1.00	27.04		
	Total Qty	**Cum**					**27.04**	**218.16**	**5899.05**
3	Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892cum and fine aggregates @ 465 cum machine mixed, machine mixed,concrete laid in layers not exceeding 15 cms, thick well compacted, in foundation and plinth, including cost of all material, labour HOM Machinery curing complete as per specification,(Page. No. 12 Item No. 4.2								
	Bangalore One								
	Footings	2	8	1.30	1.30	0.15	4.06		
	For Plinth Beam	2	1	26.70	0.20	0.15	1.60		
	Total Qty	**Cum**					**5.66**	**5449.68**	**30834.29**
4	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specificaitons. Specification No. KBS 4.6.2(Page No : 15, item No : 4.28)								
	Bangalore One								
	Footings	2	8	4.80		0.45	34.56		
	Total Qty	**Sqm**					**34.56**	**249.48**	**8622.03**

5	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2(Page No : 15, item No : 4.31)								
	Bangalore One								
	For Plinth Beam	2	2	26.70		0.30	32.04		
	Total Qty	**Sqm**					**32.04**	**316.44**	**10138.74**
6	KSRB 4-6.5 : Providing and removing centering, shuttering, strutting, propping etc., for columns, pillars, post and struts, square / rectangular/ polygon in plan including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (Page No : 16, item No : 4.32)								
	Bangalore One								
	Columns	2	8	1.10		4.90	86.24		
	Total Qty	**Sqm**					**86.24**	**395.28**	**34088.95**
7	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specificaitonsupto 3.50m from ground level. Specification No. KBS 4.6.2(Page No : 15, item No : 4.18)								
	Bangalore One								
	Roof Slab	2	1	5.35	8.00		85.60		
		2	1	5.35	0.90		9.63		
	Total Qty	**Sqm**					**95.23**	**338.04**	**32191.55**
8	KSRB 4-6.7 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for sides and soffits of beams, beam haunchings, cantilever girders, bressumers and lintels not exceeding 1m in depth including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2(Page No : 16, item No : 4.34)								
	Bangalore One								
	Lintel	2	2	26.70		0.15	16.02		
	Roof Beam	2	2	35.80		0.45	64.44		
	Total Qty	**Sqm**					**80.46**	**276.48**	**22245.58**
9	KSRB 4-6.10 :Providing and removing centering, shuttering, strutting, propping etc., for chajjas, corbels etc., including edges including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2(Page No : 16, item No : 4.37)								
	Bangalore One								
	Chajja	2	8	1.40	0.90		20.16		
	Total Qty	**Sqm**					**20.16**	**291.60**	**5878.66**

10	KSRB 4.2.2 : Providing and laying in position reinforced cement concrete of Design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.460 cum, with super plasticisers @ 3 liters confirming to is 9103-1999 reafirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls, return walls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (Page No : 13, item No : 4.11)								
	Bangalore One								
	Footings	2	8	1.20	1.20	0.45	10.37		
	Columns	2	8	0.20	0.35	4.90	5.49		
	For Plinth Beam	2	1	26.70	0.20	0.30	3.20		
	Total Qty	**Cum**					**19.06**	**6491.88**	**123735.23**
11	*KSRB 4.2.8: Providing and laying in position reinforced cement concrete of design* mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates @ 0.46cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintles, and beams retaining walls, return walls, walls (any thickness) including attached plasters, columns, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6. (Page No : 14, item No : 4.13)								
	Bangalore One								
	Lintel	2	1	26.70	0.20	0.15	1.60		
	Roof Beam	2	1	35.80	0.20	0.45	6.44		
	Roof Slab	2	1	4.95	7.60	0.15	11.29		
		2	1	5.35	0.90	0.15	1.44		
	Total Qty	**Cum**					**20.78**	**6650.64**	**138177.02**
12	KSRB 4.2.10 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 24kgs, with 12mm and down size graded granite metal coarse aggregates @0.05175cum and fine aggregtes @ 0.0345cum, with superplastisiser @0.225lts, machine mixed, well compacted for plain chajja of 7.5 cms. average thickness, upto ground floor level, including cost of all materials, labour, HOM of machinery, finishing, curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (Page No : 14, item No : 4.19)								
	Bangalore One								
	Chajja	2	8	1.40	0.90		20.16		
	Total Qty	**Sqm**					**20.16**	**492.48**	**9928.40**
13	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3 - TMT bars Fe 500 (Page No : 17, item No : 4.46.2)								
	Bangalore One								

	120kg/cum for Footings			10.37	120.00		1244.16		
	150kg/cum for Columns			5.49	150.00		823.20		
	120kg/cum for Beams			6.44	120.00		773.28		
	100kg/cum for Slabs			12.73	100.00		1273.05		
	80kg/cum for Plinth, Lintel and Chajja			6.42	80.00		513.50		
							4627.19		
	Total Qty	**Tonne**					**4.63**	**75081.60**	**347417.13**
14	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto SO m. and lift upto 1.S m. including cost of all labour complete as per specifications. specification. No. KBS(Page No : 6, item No : 2.10)								
	Bangalore One								
	Around Footings	2	8	1.30	1.30	2.40	64.90		
	Deduct Columns	2	-8	0.20	0.35	2.40	-2.69		
	Total Qty	**Cum**					**62.21**	**137.16**	**8532.45**
15	KSRB 5-11 : Providing and constructing load bearing wall with solid concrete blocks of size 400x200x200 mm having block density not lessthan 1800 kg/m3 and having a minimum average compressive strength 5.00 N/mm2 confirming to IS 2185 (Part) : 2005 and constructed with CM 1:4 , as per IS 2572:2005 including cost of all materials, labour charegs, scaffolding, curing complete as per specifications. KBS No.5.4(Page No :25, item No : 5.27.1)								
	Bangalore One								
	Walls	2	1	26.70		2.65	141.51		
	Parappet Wall	2	1	28.50		1.20	68.40		
	Deduction for openings								
	Door D	2	-1	1.50		2.10	-6.30		
	Window W	2	-8	1.20		1.20	-23.04		
	Total Qty	**Sqm**					**180.57**	**1011.96**	**182729.62**
16	KSRB15-3.10 : Providing 20mm thick cement plaster in single coat with cement mortar 1:6, to stone masonry & concrete surface including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.(Page No :114, item No : 15.20)								
	Bangalore One								
	External Walls	2	1	26.70		3.15	168.21		
	Parappet Wall	2	1	26.70		0.90	48.06		
	Deduction for openings								
	Door D	2	-1	1.50		2.10	-6.30		
	Window W	2	-8	1.20		1.20	-23.04		
	Total Qty	**Sqm**					**186.93**	**224.64**	**41991.96**
17	KSRB 15.3.2 Providing 12mm thick cement plaster in single coat with cement mortar 1:4, to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications..(Page No.113, Item No.15.10)								
	Bangalore One								
	Internal Plastering	2	1	25.10		3.00	150.60		
	Total Qty	**Sqm**					**150.60**	**178.20**	**26836.92**

18	KSRB15-3-13 : Providing 12mm thick cement plaster in single coat with cement mortar 1:3, to ceiling including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications..(Page No.114, Item No.15.21)									
	Bangalore One									
	Ceiling	2	1	4.95	7.60			75.24		
		2	1	4.95	0.90			8.91		
	Total Qty	**Sqm**						**84.15**	**208.44**	**17540.23**
19	KSRB 15.10.2 Providing white washing for every one additional coat with lime of approved quality, to give an even shade including cost of materials, labour, complete as per specifications. (Page No. 115, Item No. 15.39)									
	Same As Internal and Ceiling Plastering Qnty									
	Total Qty	**Sqm**						**150.60**	**4.32**	**650.59**
20	KSRB 15.10.4 Providing white washing to ceiling and / or sloping roof surface with additional one coat with lime of approved quality, to give an even shade including cost of materials, labour, complete as per specifications.(Page No. 115, Item No. 15.41)									
	Same As Internal and Ceiling Plastering Qnty									
	Total Qty	**Sqm**						**84.15**	**4.32**	**363.53**
21	KSRB 15-16.1 : Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to give an even shade after throughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications. - with primer. (P. No. 118, I.No. 15.53.2).									
	Same As External Plastering Qnty									
	Total Qty	**Sqm**						**186.93**	**90.72**	**16958.29**
22	Providing and applying two coats with Plastic emulsion paint of approved brand wall surface to a give an even approved shade after throuughly brushing the surface,free from mortar drops and other foreign matter, including priming , including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications,with primer. (Page No : 117, item No :15.51.2)For internal walls.									
	Same As Internal Plastering Qnty									
	Total Qty	**Sqm**						**150.60**	**97.20**	**14638.32**
23	Providing and applying two coats with Plastic emulsion paint of approved brand wall surface to a give an even approved shade after throuughly brushing the surface,free from mortar drops and other foreign matter, including priming , including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications,with primer. (Page No : 117, item No :15.51. 2 & 3) for ceiling									
	Same As Ceiling Plastering Qnty									
	Total Qty	**Sqm**						**84.15**	**101.52**	**8542.91**

24	Providing vitrified tiles 60 x 60cms of approved make, shade and size for flooring laid on a bed of 12mm thick cement mortar 1:3 mix, flush pointing with white cement using colour pigment, including cost of materials, labour, curing complete as per specification. (Page No : 107, item No :14.45)								
	Internal Floor Area	2	1	5.00	5.00		50.00		
	Total Qty	**Sqm**					**50.00**	**1200.96**	**60048.00**
25	KSRB 14-17.2 : Providing skirting, dado, rises of steps with colour glazed tiles on 10mm thick cement plaster 1:3 and jointed with white cement slurry over rough plaster surface (excluding cost of rough plastered surface which should be measured and paid separately) using glazed tiles of approved make and size including cost of materials, labour, complete as per specifications. Specification No.KBS 14.16, 14.17 - Colour glazed tiles 30x60 cms 6mm thick with border of size 30 x 10 cms. (P.No.106, I.No. 14.41.2)								
	Bangalore One								
	Skirting	2	1	25.10		0.10	5.02		
	Total Qty	**Sqm**					**5.02**	**1602.72**	**8045.65**
26	KSRB 9.4-2 : Providing Honne wood frames of doors, windows, clerestory windows, ventilators and other frames, wrought, framed or assembled including making plaster groves (excluding cost of cement concrete and side clamps), but including cost of materials, labour, HOM of machineries complete as per specifications. Specification No. KBS 9.33 (Page No : 51, item No :9.11)								
	Bangalore One								
	Door D	2	1	7.20	0.125	0.125	0.23		
	Total Qty	**Cum**					**0.23**	**111083.40**	**24993.77**
27	KSRB 9.5-2 : Providing and fixing in position fully panelled Honne wood shutters for doors, styles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and styles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, HOM of machineries complete as per specifications. (excluding cost of fixtures) Specification No. KBS 9.34 (Page No : 51, item No :9.15)								
	Bangalore One	2	1	1.50	2.10		6.30		
	Total Qty	**Sqm**					**6.30**	**5014.44**	**31590.97**
28	KSRB 7.9:Providing and fixing .S.gill work for windows and ventilators using M.S.flats, or M.S. square rods, or combination of M.S.flats and square rods as per approved design, drawing including cutting steel sections and welding the same to required pattern with a coat of red lead primer, cost of materials, fixtures, labour and HOM of machinery complete as per specifications. Specification No. KBS 7.12 . (Page No : 32, item No :7.9)								
	Bangalore One								
	Window W	2	8	1.20		1.20	23.04		
	at 21kgs/sqm						483.84		
	Total Qty	**Kgs**					**483.84**	**84.24**	**40758.68**

29	KSRB 7.10 : Providing and fixing in position aluminium windows and ventilators as per approved drawings with sliding shutters using double track window frame section of size 61.85x31.75mm. with 1.2mm thick, bottom section weight 0.695 kg/m, sides and top sections 1.3 mm. thick weight 0.659 kg/m; and shutter comprising top and bottom section of size 40mmx18mm, 1.25mm thick 0.417 kg./m; shutter outer side 40mmx18mm, 1.25mm.thick weight 0.417 kg/m, shutter interlock section 40mmx26.7mm, 1.1mm thick, weight 0.469 kg/m. the shutters mounted on nylon rollers with approved quality of fixtures such as aluminium handles tower bolts etc.; and providing and fixing 5.5mm. thick plain glass for shutters fitted with rubber beading aluminium sections including cutting to required length, joints mitred subdividing the frame tenonned and rivetted in the assembled frame stiffened with end clips at corners angles etc., and fixed to the walls, lintels, floor beams/cills as the case may be with necessary steel screws, raul plugs, or teak wood gatties including cutting masonry or concrete and making good the original surface using cement mortar, aluminium sections pretreated for removal of any Specification No. KBS using aluminium section anodized to 12 - 15 microns. (P.No. 301/ I. No. 7.10.1									
	Bangalore One								
	Windows	2	8	1.20		1.20	23.04		
	Total Qty	**Sqm**					23.04	**4123.44**	**95004.06**
30	KSRB 15-17.4 : Applying priming coat over new wood surface and / or wood based surface, after brushing with ready mix enamel priming paint including preparing the surface after thoroughly cleaning oil, grease, dirt and foreign matter, sand papering and knotting ready mix paint including cost of materials, labour, complete as per specifications.(Page. No. 118 Item No. 15.58)								
	Same as Door Qnty								
	Total Qty	**Sqm**					**6.30**	**33.48**	**210.92**

31	Providing and applying painting two coats (excluding priming coat) on new wood surface and / or wood based surface with enamel paint to give an even shade, cleaning the surface of all dirt, dust and foreign matter, sand papering including cost of materials, labour, complete as per specifications.(Page. No. 118 Item No. 15.60.1)								
	Same as priming coat qnty for Door								
	Total Qty	**Sqm**					**6.30**	**90.72**	**571.54**
								TOTAL :	**1358534.12**
32						**Cost towards Electrical Works, Sanitation and Furnitures**			**611340.35**
33						**Cost towards Preparation of DPR LS**			**13586.00**
34						**Cost towards PMC / Third Party inspection LS**			**13586.00**
								Sub Total	**1997046.47**
35						**Miscellaneous and rounding off**			**2953.53**
								Total	**2000000.00**

Certificate.

1. The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2. The provisions made in the estimate are necessary and essential.
3. The workspot was inspected and work is found to be necessary.
4. The area comes within the Bruhat Bangalore Mahanagara Palike limits.

For Tejus Consultants

Assistant Engineer

Assistant Executive Engineer

Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Improvements to Balance Roads, and Drains at Bhuvaneshwarinagara, Maruthi Layout and Sorrounding Area in ward No 06 Thanisandra, Byatarayanapura Sub Division.

Est Cost: =40.0Lakh

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	Removing and refixing stone slabs of drains and pointing in CM (1:3) (P.No.25, I.No.5.33 of PW, P&IWTD SR 2016-17)								
	Maruthi Nagar	Sqm							
	Maruthi Nagar Main Road		2	560.00	1.35		1512.00		
	Consider 20% for Damaged and Missing Slabs						-302.40		
							1209.60	80.56	**97445.38**
2	Providing granite Slabs of Selected quality roughly dressed and fixed in cement mortor (1:6) including fixing curing etc,. Complete. 7.5cms thick (P.No.25, I.No.5.31.1 of PW, P&IWTD SR 2016-17)								
	For BS Slab Drain	Sqm							
	Consider 20% for Damaged and Missing Slabs						302.40		
							302.40	665.68	**201301.63**
3	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	Desilt	Cum							
	Maruthi Nagar								
	Maruthi Nagar Main Road		2	560.00	0.45	0.25	126.00		
	Bhuvaneshwarinagara								
	14th Cross		2	245.00	0.45	0.20	44.10		
	New Culverts		4	6.50	1.80	1.05	49.14		
							219.24	186.92	**40980.34**
4	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	Bed Concrete	Cum							
	New Culverts		4	6.50	1.80	0.15	7.02		
							7.02	5348.76	**37548.30**
5	KSRB 5.2-3: Providing and constructing granite size stone masonry in foundation cement mortor 1:6, stone hammered dressed in courses not less than 20cms high, bond stones at 2m. apart in each course including cost of materaials, labour, curing complete as per specifications. Specifcation No. KBS 5.1.13. (P.No.23, I.No.5.6 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Cum							
	New Culverts		8	6.50	0.60	0.90	28.08		
							28.08	4438.22	**124625.22**
6	KSRB 15.1.1 Providing flush pointing to square rubble, course or uncoursed stone masonry with cement mortar 1:3, 20mm deep, after raking joints to depth of 20mm nicely lining, including cost of materials, labour, curing complete as per specifications. (P.No.113, I.No.15.1 of PW, P&IWTD S.R 2016-17)								
	SSM Wall	Sqm							
	New Culverts		8	6.50	--	0.90	46.80		
							46.80	102.82	**4811.98**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
7	KSRB 4-1.6: Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.6 of PW,P&IWTD S.R 2016-17)								
	Coping	Cum							
	New Culverts		8	6.50	0.600	0.100	3.12		
							3.12	5767.46	**17994.48**
8	Providing and fixing **RCC Precast cover slab of 250mm thick** for drain in cement concrete M20 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)								
	Cover Slab	Sqm							
	New Culverts		4	6.50	1.80	--	46.80		
							46.80	5317.00	**248835.60**
9	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.90 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to embankment location and complete as per specifications. MORTH Specification No.301 (P.No.143, I.No.19.14 of PW,P&IWTD S.R 2016-17)								
	Road Portion	Cum							
	Bad Reaches								
			10	1.80	2.00	0.25	9.00		
			15	1.00	1.20	0.25	4.50		
			20	0.50	6.50	0.25	16.25		
			3	17.00	0.80	0.25	10.20		
	Cross Road		1	210.00	5.50	0.20	231.00		
							270.95	148.76	**40306.52**
10	KSRRB M 400-17, Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechaniqal mix plant carriage ' of mixed Material by tipper to site, laying in uniform layers with paver in sub- base/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density.complete as per specifications. MORTH Specification No. 406 (P.No.158, I.No.20.18 of PW,P&IWTD SR 2016-17)								
	Road Portion	Cum							
	Bad Reaches								
			10	1.80	2.00	0.23	8.28		
			15	1.00	1.20	0.23	4.14		
			20	0.50	6.50	0.23	14.95		
			3	17.00	0.80	0.23	9.38		
	Cross Road		1	210.00	5.50	0.23	265.65		
							302.40	1768.08	**534674.46**
11	KSRRB M 500-6, Providing and applying primer coat with SS bitumen emulsion on prepared surface of granular Base such as WBM WMM including clearing of road surface and spraying primer at the rate of 0.60 kglsqm using mechanical means complete as per specifications. As per MORTH specification clause No. 502 (P.No.161, I.No.21.6 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Bad Reaches								
			10	1.80	2.00	--	36.00		
			15	1.00	1.20	--	18.00		
			20	0.50	6.50	--	65.00		
			3	17.00	0.80	--	40.80		
	Cross Road		1	210.00	5.50	--	1155.00		
							1314.80	29.68	**39023.26**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
10	KSRRB 500-2: Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatement including cost of all materials, labour, HOM of machineries complete as per specifications. MORTH Spec, Chapter 5 (P.No.161, I.No.21.2 of PW,P&IWTD SR 2016-17)								
	Road Portion	Sqm							
	Maruthi Nagar								
	Maruthi Nagar Main Road		1	560.00	6.50	--	3640.00		
	Cross Road		1	210.00	5.50	--	1155.00		
	Bhuvaneshwari Nagar								
	14th Cross		1	245.00	6.00	--	1470.00		
							6265.00		
	Deduct prime coat						-1314.80		
							4950.20	3.18	**15741.64**
12	KSRRB M500-7 : Providing and applying tack coat using 80/100 grade bitumen (VG10) on prepared black topped surfaces at 2.5 Kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (P.No.161 I.No.21.7 of PW,P&IWTD SR of 2016-17)								
	For Laying DBM for Profile Correction	Sqm							
	Maruthi Nagar								
	Maruthi Nagar Main Road		1	100.00	3.70	--	370.00		
	Bhuvaneshwari Nagar								
	14th Cross		1	50.00	2.80	--	140.00		
	Bad Reaches								
			10	1.80	2.00	--	36.00		
			15	1.00	1.20	--	18.00		
			20	0.50	6.50	--	65.00		
			3	17.00	0.80	--	40.80		
	For Laying BC								
	Maruthi Nagar								
	Maruthi Nagar Main Road		1	560.00	6.50	--	3640.00		
	Cross Road		1	210.00	5.50	--	1155.00		
	Bhuvaneshwari Nagar								
	14th Cross		1	245.00	6.00	--	1470.00		
							6934.80	12.72	**88210.66**
14	KSRRB M500-16. Providing and laying dense bituminous macadam 50-75mm compacted thickness with 4.5% VG-30 Bitumen using 40/60 TPH capacity H.M.P, using crushed aggregates of grading II, premixed with VG 30 grade bituminous binder and transporting the hot mix to work site, laying with mechanical paver to the required grade level and alignment rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10, complete in all respects complete as per specification MORTH specification No. 507 (P.No.162 I.No. 21.17.6 of PW,P&IWTD S.R 2016-17)								
	Maruthi Nagar	Cum							
	Maruthi Nagar Main Road		1	100.00	3.70	0.05	18.50		
	Bhuvaneshwari Nagar								
	14th Cross		1	50.00	2.80	0.05	7.00		
	Bad Reaches								
			10	1.80	2.00	0.05	1.80		
			15	1.00	1.20	0.05	0.90		
			20	0.50	6.50	0.05	3.25		
			3	17.00	0.80	0.05	2.04		
							33.49	7036.28	**235645.02**

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
13	KSRRB M500-19. Providing and laying bituminous concrete 30-40 mm compacted thickness with VG30 Bitumen grade using 40-60 HMP using crushed aggregates of grading II, premixed with bituminous binder at 5.4% of mix and filler, transporting the hot mix to work site, laying with a mechanical paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause No. 500.9 complete in all respects as per specifications. MORTH Specification No. 509 (P.No.165 of I.No.21.22.6 in PW,P&IWTD S.R 2016-17)								
	For Laying BC	Cum							
	Maruthi Nagar								
	Maruthi Nagar Main Road		1	560.00	6.50	0.04	145.60		
	Cross Road		1	210.00	5.50	0.04	46.20		
	Bhuvaneshwari Nagar								
	14th Cross		1	245.00	6.00	0.04	58.80		
							250.60	8013.60	**2008208.16**
14	KSRRB M800-13. Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803.(P.No.185, I.No.24.15 of PW,P&IWTD SR 2016-17)								
	Centre Line	Sqm	2	1015.00	0.10	--	203.00		
							203.00	542.72	**110172.16**
							Total Construction Cost		**3845524.805**
15	Add cost of **Waste Plastic** @ 8% of Bitumen weight								
	Bitumen = 141 kg/cum		--	--	--	--	**2826.77**	27.00	**76323.00**
	Waste = 156.10 X 141 X 8 / 100 = 1760.81								
16							**Cost towards Preparation of DPR LS**		**38456.00**
17							**Cost towards PMC / Third Party inspection LS**		**38456.00**
								Sub Total	**3998759.80**
18							**Miscellaneous and rounding off**		**1240.20**
								Total	**4000000.00**

Certificate.

1. The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2. The provisions made in the estimate are necessary and essential.
3. The workspot was inspected and work is found to be necessary.
4. The area comes within the Bruhat Bangalore Mahanagara Palike limits.

For Tejus Consultants

Assistant Engineer

ಸಹಾಯಕ ಇಂಜಿನಿಯರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

Assistant Executive Engineer

ಸಹಾಯಕ ಕಾರ್ಯ ನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Construction of RO water purifier plant in R.K. Hegdenagar, Saraipalya, Amarjyothi Layout, Bharathanagar and Dasarahalli in ward no. 06 Thanisandra, Byatarayanapura sub division.

Est Cost: =75.0Lakh

Sl. No.	Description of work	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Hand pump, MWS of P.W.S.S by vertical electrical sounding by adopting Venner or Schlumberger's method, including reconnaissance survey of geological formation, Gerophysical investigation of existing Ground Wate in the vicinity, its qualityf 1.0 meter in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instrument and accessories to work site., engaging techinical personal and labour required etc., as per Specification and direction (P.48, I. 9.4) PRED.SR 2012-13	Each BW	5				5	1882.00	9410.0
2	Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars, cap etc.,) P. 46 / I. 9.1 PRED SR 2012-13	Rmtr							
	0 to 50 m		5	50.00			250.00	306.00	76500.0
	50 to 100 m		5	50.00			250.00	400.00	100000.0
	100 to 150 m		5	50.00			250.00	445.00	111250.0
	150 to 200 m		5	50.00			250.00	470.00	117500.0
	200 to 250 m		5	50.00			250.00	544.00	136000.0
3	Supply of ISI mark 175 mm nominal bore, Plain end steel casing pipe - grade of Steel Fee 410 of wall thickness 5.4mm thick confirming to IS 4270:2001 and latest amendments, electric resistance welded steel tube material and confirming to IS 1387/1993 and manufactured by baseic open hearth electric or basic oxygen process in random length of 5 to 7 mts both ends threaded confirming tio IS 554/1985, one end fixied with socket confirming to IS 4270:2001 and the other end with screwed pipes ISI Marking weighing 25.10Kg/mtr (Inclusive of all taxes and durties) Prices include Collar-medium duty P. iii, I No. 84 PRED SR 2012-13	Rmtr							
4	Providing 250mm dia PVC Pipe 6kg/cm SE PRED Approved Rate	Rmtr	5	50.00			250.00	1325.00	331250.0
5	Providing and fixing 160mm Borewell Cap P. iii, I No. 85	Each	5	18.00			90.00	754.47	67902.0
			5				5	100.00	500.0

6	Supply and delivery at site brand New texmo/ innoval/ Lubi/ Sabar / Atalanta/ Calamal/ make suitable for vertical installation in 150mm dia bore well comprising of single stage or multistage CF pump close coupled by measns of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water (Wet type) squirrel cage submersible induction motor suitable for opertation of 3PH., 50 Hz, 380/440 volts AC supply fitted with required aqccessories such as suction, casing suction strainers sand guard Non return value etc. complete . The pump and motor shall form an integral unit with all the required fittings 12.50 HP 25 stage. ATALANTA< SUGNA< CRI, KIRLOSKAR and other Equivalent Pumps PWD SR 2016-17 P. XXXXII Item No. 24 including of all taxes	No							
	12.5 HP 25 Stage		5				5	60400	302000.0
7	Supplying of ISI marked galvanized mild steel tube (continously welded electric resistance welded (ERW) high frequency, induction welded (HFIW) Hot finished welded type of nominal bore given below screwed at both ends as per IS 554/1986 with latest amendments, pipes threaftes at one end and the other end protected asper specification in random lengths of 4 to 7 mtrs Confirming to IS 1239 part I/1990 with amendament 1-5 and with all its latest amendements if any. The pipes supplied should be with BIS mark No 3/08-09 2406/15.10.2008	Rmtr							
			5	250.00			1250.00	375.00	468750.0
8	Heavy Duty Collar 50 mm dia	Nos	220				220	130.00	28600.0
9	Supplying and drawing 3 core flat PVC sheathed submersible pump cable manufactured with electrolytic grade copper with flexible copper with low resistance conductor confirming to table 3 class 5 of IS:8130-1984 and virgin grade PVC insulation and powder coating extruded PVC sheathed suitable for working voltage upto 1100Volts as per IS-694:1990 & confirming to GTP of GROUP-A. P. No. 12 / I No. 2.10.4(1) 3C x 6 Sqm mm KPWD Electrical SR 2014-15	Mtr							
			10	255.00			2550.00	188.70	481185.0
10	Erection of pumpset including aligning and balancing with all necessary erection materials and labour including supply and erection of one pair supporting clamps, one borewell cap. Cable clips with bolts, nuts, valves guages etc., involoved in the job (Necessary GI pipe and specials with be supplied by the board at the site free of cost) (As per rate approved KUWS & DB for year 2008-09	No							
			5				5	3000.00	15000.0
11	Supplying and fixing 20"x20"x2.5" polished wood board made of not less than 15mm thick plank on both sides with planks made out of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws etc., P No. 44 / I No. 6.6.6 KPWD Electrical SR 2014-15	Each							
			5				5	302.00	1510.0

12	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A P No. 55/ I No. 7.4.4 4 core 16 Sqmm KPWD Electrical SR 2014-15	Mtr							
			5	30.00			150.00	140.40	21060.0
13	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.In existing trench/duct. P No. 61 / I No. 7.8.1 6Sqmm to 16 Sqmm) KPWD Electrical SR 2014-15	Mtr							
			5	30.00			150.00	10.80	1620.0
14	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete.(As per Civil SR KSRB I-2, P-7) P No. 61 / I. No. 7.9.3 KPWD Electrical SR 2014-15	Mtr							
	For Cutting Road Surface		5	25.00			125.00	85.00	10625.0
15	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV P. No. 62 / I No. 7.12.1 KPWD Electrical SR 2014-15	Mtr							
	40mm dia GI pipe		5	4.00			20.00	345.00	6900.0
16	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc., P. No. 62 / I.No. 7.13.2 KPWD Electrical SR 2014-15	No.							
	16Sqmm		5				5.00	280.00	1400.0
17	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia, (P No. 55, I No. 7.1) KPWD Electrical SR 2014-15	No							
			5				5	2727.00	13635.0
18	Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers.P No. 44 / I No. 6.7.2 KPWD Electrical SR 2014-15	No.							
	32 Amps		30				30	180.00	5400.0
19	KSRB 13-7.1-4: Providing and fixing in position 50mm nominal bore gun metal non-return valve horizontal type of approved make including cost of all materials, labour and HOM of equipments with all leads complete as per specifications NO KBS 13.2.16 / 13.13 Page No. 93 Item No. 13.55 / PWD SR 2016-17	Nos							
			5				5	1615.68	8078.0
	Basic Rate	1496.00							
	Area Weightage @ 8%	119.68							
	Total	1615.68							

20	Providing NP/CP waste unions conforming to ISI specifications and fixing them in position as per *directions including cost of materials, fixtures and* conveyance to work spot etc., complete. P. No. 95 / I. No. 13.81.3 PWD SR 2016-7	No							
	50mm dia		5				5	232.20	1161.0
	Basic Rate	215.00							
	Area Weightage @ 8%	17.20							
	Total	232.20							
21	Supplying and fixing 50mm dia GI X nipple with ISI mark with all lead and lift loading unloading and labour charges etc complete	No							
			5	4.00			20	80.00	1600.0
22	Supplying shunt capaitors conforming to IS 2834, 3phase 400/440 volts grade for power factor improvement of rotating machinery, Capacitor in KVAR rating Nos. 2KVAR capacity with all lead and lift =, loading, unloading and labour charges etc complete as per specifications	No							
			5				5	350.00	1750.0
23	Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. 5-32Amps TPN P No. 47 / I No.6.16.5 KPWD SR 2014-15	No							
			5				5	1547.00	7735.0
24	Fabricating supplying and mounting MS box made out ... SWG suitable for floor / wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished with 2 coats of red oxide primer paint and finally finished with approved colour enameled metal paint etc., complete P.No. 49, I. No. 6.40.2 KPWD Electrical SR 2014-15	Sq.Cm							
	16SWG		10	120.00	60.00		72000		
			5	300.00	25.00		37500		
							109500	0.33	36135.0
25	Supplying and delivery at site brand new star / Essen/ Lotus/Sun-shines/Adarsh/ GK Controls best indigenous make combined energy meter - cum- control panel board unit of size 600x450 x200 mm minimum mechanically strong vermin and water proof. The unit shall have two detachable doors suitable for operation on 3 ph, 50Hz, 380/440 volts, A.C supply with spring loaded latch, locking device with a key ribs should be provided inside the door, canopy apron and louvers ventilators shall be provided. the combined energy meter cum- control panel board unit suitable for operation. The panel board shall be fabricated on single unit in the above components for suitable pumpset. 12.5HP to 15 HP Star Delta Starter SERDED Rate	No.							
			5				5	11000	55000.0
26	Earthwork excavation for pipeline trenches including deporiting or bank up to a lead of 50 mtrs including shiriry and statting danger lighting and using site rails and boming poles at every 100 mtrs wherever necessary as directed in th following strructure manhole. Page No. 01/ Item No.1.2.2 / PRED SR 2012-13 Hard Soil	Cum							
			5	60.00	0.60	0.75	135.00		

							135.00	188.00	25380.0
	Basic Rate	188.00							
27	Providing and instalation at site of works P.V.C.Pipes including cost of pipes and specials and incluidng lowring into trenches, laying true to line, level and perfect linking at joints, leak proof including jointing encasing the pipe alround to a depth Not less than 15cm with grave or selected earth avalabile from the execavation Etc., Page No.15 item No.3.4.2 b PRED SR 2012-13.	Rmtr							
	75 mm dia 6 KSC PVC pipe		5	60.00			300.00		
							300.00	157.00	47100.0
28	Refilling the basement and pipeline treanches with secleted available earthe for trench excavation including authority condition in layers from thedi including disponsary of the sunplus earth with a heavy 200 mtrs Page No. 3 / Item No. 1.6 / PRED SR 2012-13	Cum							
			Qty. Vide Item No. 27				135.00	61.00	8235.0
	Basic Rate	61.00							
29	KSRB 13.6.3-6 : Providing and fixing in position brass gate valve with C.I wheel of approved quality (screwed end) 50mm nominal bore including cost of all materials, labour and HOM of equipments with all leads complete as per specifications. Specification No. KBS 13.2.6/13.3 P. 92 / I.13.37 PWD SR - 2016-17	Each							
			10				10	2216.16	22162.0
	Basic Rate	2052.00							
	Area Weightage @ 8%	164.16							
	Total	2216.16							
	ROOM FOR RO PLANT								
30	KSRB 2-2.2 : Earth work excavation for foundation of buildings, culverts water supply, sanitary line and electrical conduits either in pits or in trenches 1.5m and above in width, in Hard soil not exceeding 1.5m, in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m, after breaking of clods complete as per specifications, specification, No, KBS 2.1(a) / 2.3.5, Page No. 5 / Item No. 2.3/ PWD SR 2016-17	Cum							
	Centre Line	5	1	18.40	0.90	0.80	66.24		
	Columns	5	4	1.50	1.50	1.20	54.00		
							120.24		
							120.24	204.12	24543.0
	Basic Rate	189.00							
	Area Weightage @ 8%	15.12							
	Total	204.12							
31	KSRB 4-1.3 : Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180 kgs with 40mm and down size graded granite metal coarse aggregates @ 0.85cum and fine aggregares @ 0.57 cum machine mixed, concrete laid in layers not, exceeding 15cms, thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1,4.2. No. 12/ Item No. 4.3/ PWD SR 2016-17	Cum							
	Wall Portion	5	1	18.40	0.90	0.15	12.42		
		5	4	1.50	1.50	0.15	6.75		
	For Flooring	5	1	4.70	4.10	0.15	14.45		

							33.62		
							33.62	5256.36	176719.0
	Basic Rate	4867.00							
	Area Weightage @ 8%	389.36							
	Total	5256.36							
32	KSRB 5.2.3 : Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications.KBS 5.1.13 Page No. 23 / Item No. 5.6 / PWD SR 2016-17	Cum							
	Wall Portion	5	1	18.40	0.75	0.60	41.40		
	Deduction for Columns	5	4	1.50	0.75	0.60	-13.50		
							27.90		
							27.90	4521.96	126163.0
	Basic Rate	4187.00							
	Area Weightage @ 8%	334.96							
	Total	4521.96							
33	KSRB 5.3-3 : Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications.KBS 5-1.13 Page No. 23 / Item No. 5.9 / PWD SR 2015-16	Cum							
	Wall Portion	5	1	18.40	0.45	0.45	18.63		
	Deduction for Columns	-5	4	1.50	0.45	0.45	-6.08		
							12.55		
							12.55	5405.40	67838.0
	Basic Rate	5005.00							
	Area Weightage @ 8%	400.40							
	Total	5405.40							
34	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. Specification No. KBS 2.9 (P.6/I.2.10) PWD SR 2016-17	Cum							
				Qty Vide Item No. 30			120.24	137.16	16492.0
	Basic Rate	127.00							
	Area Weightage @ 8%	10.16							
	Total	137.16							
35	KSRB 5-11 : Providing and constructing load bearing wall with solid concrete blocks of size 400x200x200 mm having block density not lessthan 1800 kg/m3 and having a minimum average compressive strength 5.00 N/mm2 confirming to IS 2185 (Part) : 2005 and constructed with CM 1:4 , as per IS 2572:2005 including cost of all materials, labour charegs, scaffolding, curing complete as per specifications. KBS No.5.4. Page No. 25 / Item No. 5.27 / PWD SR 2016-17	Sqm							
	Wall Portion	5	2	5.10		3.00	153.00		
		5	2	4.10		3.00	123.00		
	Parapet Wall	5	2	5.10		0.40	20.40		
		5	2	4.10		0.40	16.40		
	Steps	5	4	4.10		0.10	8.20		
							321.00		
	Deductions RS	5	1	3.04		2.50	38.00		
	V	5	2	0.90		0.60	5.40		
							-43.40		
							277.60		
							277.60	1011.96	280920.0
	Basic Rate	937.00							

	Area Weightage @ 8%	74.96							
	Total	1011.96							
36	KSRB 4.2.2 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320 kgs, with 20mm and down size graded granite metal, coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum with superplastisiser @ 3lts confirming to IS 9103-1999 reaffirmed-2008 machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, staircase, lintels, retaining walls, walls (any thickness) including attached plasters, column, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc, including cost of all materials, labour, HOM of machinery, curing, complete as per specifications. Specification No. KBS 4.1,4.6, No. 13/ Item No. 4.11/ PWD SR 2016-17	Cum							
	Column Footing	5	4	1.20	1.20	0.50	14.40		
		5	4	0.23	0.23	3.80	4.02		
	Plinth Beam	5	1	18.40	0.20	0.20	3.68		
	Lintels	5	1	18.40	0.20	0.15	2.76		
	Roof Slab	5	1	5.55	4.50	0.125	15.60		
							40.46		
							40.46	6491.88	262661.0
	Basic Rate	6011.00							
	Area Weightage @ 8%	480.88							
	Total	6491.88							
37	KSRB 4.2.10 : Providing and laying in position reinforced cement concrete ofmix M20 with OPC cement @ 24kgs, with 12 mm and down size graded granite metal coarse aggregates @ 0.5175 cum and fine aggregates @ 0.345 cum with superplastisiser @ 0.225lts,machine mixed, well compacted for plain chajja of 7.5 cms. average thickness, upto ground floor lever, including cost of all materials, labour, HOM of machinery, curing, complete as per specification. Specification NO. KBS 4.1, 4.6 Page No. 14 / Item No. 4.19 / PWD SR 2016-17	Sqm							
	W	5	1	4.50	0.45		10.12		
							10.12		
							10.12	492.48	4984.0
	Basic Rate	456.00							
	Area Weightage @ 8%	36.48							
	Total	492.48							
38	KSRB 4.9.1: Providing TMT steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost pf materials, labour, HOM of machinery complete as per specifications.Specification No. KBS 4.6.3 Page No. 17 / Item No. 4.46.2 / PWD SR 2016-17 - FE 500	Ton							
	For Roof, Columns Beams @ 120 Kg / Cum	1	120.00	40.46			4855.20		
	Chajjas @ 7.5 Kg / sqm	1	7.500	10.12			75.90		
							4931.10		
							4.931	75081.60	370227.0
	Basic Rate	69520.00							
	Area Weightage @ 8%	5561.60							
	Total	75081.60							

39	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth and string courses cost of all materials, labour complete as per specifications. Specification NO KBS 4.6.2 Page No. 15 / Item No. 4.31/ PWD SR 2016-17	Sqm							
	Columns Footing	5	4	4.80		0.50	48.00		
		5	4	0.92		4.00	73.60		
	Plinth	5	1	18.40		0.20	18.40		
	Lintels	5	1	18.40		0.15	13.80		
	Roof	5	1	5.55	4.50		124.87		
	Sides	5	2	5.55		0.15	8.32		
		5	2	4.50		0.15	6.75		
							293.74		
							293.74	316.44	92951.0
	Basic Rate	293.00							
	Area Weightage @ 8%	23.44							
	Total	316							
40	KSRB 4-6.10 : Providing and removing centering, shuttering, strutting, propping etc., for chajjas, corbels etc., including edges including cost of all materials, labour complete as per specifications. Specification NO KBS 4.6.2 Page No. 16 / Item No. 4.37 / PWD SR 2016-17	Sqm							
		5	1	4.50	0.60		13.50		
							13.50		
							13.50	291.60	3937.0
	Basic Rate	270							
	Area Weightage @ 8%	22							
	Total	292							
41	KSRB 15.3.13 : Providing 12mm thick cement plaster in single coat with cement mortar 1:3, to ceiling including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. Page No. 114 / Item No. 15.21 / PWD SR -2016-17	Sqm							
		5	1	4.70	4.10		96.35		
							96.35	208.44	20083.0
	Basic Rate	193							
	Area Weightage @ 8%	15							
	Total	208							
42	KSRB 15.3.11 :Providing 20mm thick cement plaster in single coat with cement mortar 1:4, to stone masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. Page No. 114 / Item No. 15.19 / PWD SR 2016-17 (Inside wall)	Sqm							
	Inside wall	5	2	4.70		3.00	141.00		
		5	2	4.10		3.00	123.00		
							264.00		
	Deductions - For rolling shutter	5	1	3.04		2.50	38.00		
	ventilators	5	2	0.90		0.60	5.40		
							-43.40		
							220.60		
							220.60	252.72	55750.0
	Basic Rate	234							
	Area Weightage @ 8%	19							
	Total	253							
43	KSRB 15-7 : Providing lime rendering for plastering to wall and ceiling, including cost of materials, labour, curing complete as per specifications. (P. 115 / I. 15.33 PWD SR - 2016-17).	Sqm							

			Qty Vide Item No. 14+15				316.95	27.00	8558.0
	Basic Rate	25							
	Area Weightage @ 8%	2							
	Total	27							
44	KSRB 15.3.9: Providing 18mm thick cement plaster in single coat with cement mortar 1:6, to brick masonry including rounding off corners wherever required smooth rendering, providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications Page No. 114 / Item No. 15.17 / PWD SR 2016-17 (Out side Wall)	Sqm							
	Out Side	5	2	5.10		3.45	175.95		
		5	2	4.50		3.45	155.25		
							331.20		
	deduction for RS	5	1	3.04		2.50	38.00		
	V	5	2	0.90		0.60	5.40		
							-43.40		
							287.80		
	Basic Rate	198					287.80	213.84	61543.0
	Area Weightage @ 8%	16							
	Total	214							
45	KSRB 15-14.1 : Providing and applying two coats with oil bound washable distemper of approved brand and shade on wall surface including priming coat with distemper primer after thoroughly brooming the surface free from mortar drops and other foregin matter including preparing the surface even and sand paper smooth, cost of materials, labours, complete as per specifications PWD SR 2016-17 (P.117 /I. 15.49.1)	Sqm							
			Qty Vide Item No.13+14				537.55		
	Basic Rate	71					537.55	76.68	41219.0
	Area Weightage @ 8%	6							
	Total	77							
46	KSRB 15-16.1: providing and finishing external walls in tow coats with water proof cement paint of approve brand and shade to give an even shade after thourghly brooming the surface to remove all dirt and losse powdered material, free from mortar dops and other foreign matter cost of materials, labours, complete as per specifications PWD SR 2016-17 (P. 118 / I. 15.53.2) with Primer	Cum							
			Qty Vide Item No.16				287.80		
	Basic Rate	84					287.80	90.72	26109.0
	Area Weightage @ 8%	7							
	Total	91							
47	KSRB 15-18.2 : Providing and applying enamel metal paint two coats (excluding priming coat) over new steel or other metal surface brushing to give an even shade after cleaning oil, grease, dirt and other foreign matter, including cost of materials, labour, complete as per specifications. Page No. 121 / Item No. 15.74 / PWD SR 2016-17	Sqm							
	Out Side	2	5	6.04		2.50	169.87		
		5	2	0.90		0.60	5.40		
							175.27		
	Basic Rate	82.00					175.27	88.56	15522.0
	Area Weightage @ 8%	6.56							
	Total	88.56							

48	Providing and fixing Special make glazed Vitrified tiles (Granomite finis) of approved make, quality and colour of sized 6000x600x10mm thick fixed on existing flooring wit ha special roffe adhesive for flooring and skirting etc., complete including providing spears at required interval and removing stains etc., complete. Page No. 107 / Item No. 14.43 / PWD SR 2016-17	Sqm							
		5	1	4.70	4.10		96.35		
		5	2	4.70		1.50	70.50		
		5	2	4.10		1.50	61.50		
							228.35		
	Deduction RS	5	1	3.05		1.50	-22.87		
							205.48		
							205.48	1285.20	264083.0
	Basic Rate	1190.00							
	Area Weightage @ 8%	95.20							
	Total	1285.20							
49	Providing and laying/fixing cement base, precast pre polished cement concrete, designer tiles 25mm thick conforming to IS 1237 heavy duty tiles for flooring reads of steps of steps and landin, laid on a bed of 12mm thick cement mortar 1:3 mis finished with flush pointing using white cement, including cost of material,s including cutting, griding the edge ti half/ful rounf wherever requires labour, curing complete as per specification Page No. 109 / Item No. 14.62 / PWD SR 2016-17	Sqm							
		5	4	2.50		0.45	22.50		
							22.50		
							22.50	1171.80	26366.0
	Basic Rate	1085.00							
	Area Weightage @ 8%	86.80							
	Total	1171.80							
50	KSRB 7.7 : Providing and fixing in position in cement concrete 1:3:6 steel glazed windows and ventilators side hung/top hung fully openable as per approved drawings using Z angles of 25x33x3mm, weighing 1.419Kg/m both for outer and inner frames and central mullion section of size 25x46x3mm weighing 2.28Kg/m duly providing T section 19x19x3mm weighing 0.839 kg/m for glazing of windows not more than 34 cms. c to c including providing and fixing 4mm thick reeded glass with teakwood beading of required size, all steel section should confirm to I.S. 7452:1990, 4nos, of holdfasts of approved size section should be cut to length welded and electrically grinded subdividing frames of unit shall be tenonned and revetted into the frames electrically. All the steel surface shall be thoroughly cleaned free of rust and painted with one coat of anti-corosive paint and finishing with two coats of ready mix paint of approved colour and make including cost of materials, fixtures, labour and HOM of machinery complete as per spe	Sqm							
		5	2	0.90		0.60	5.40		
							5.40		
							5.40	3812.40	20587.0
	Basic Rate	3530.00							
	Area Weightage @ 8%	282.40							
	Total	3812.40							

51	KSRB: 7.5 Providing and fixing pull and push type rolling shutters of approved make out of 18 guage, 75mm wide cold rolled steel laths of convex corrugation, with side guides and bottom rail, with interlocking arrangements for steel laths by means of alternate clips, suspension shaft with High tension coil type springs two numbers, mounted on specially designed pipe shaft, with bracket plates, guide channels, ball bearing arrangements, for inside & outside locking with push & operations complete Including pulling hooks, 4nos handles wit hall fittings and accessories, painted with a coat of red lead paint (without top cover) cost of materials, labour, HOM of machinery complete as per specifications. Shutter size 3mx2.8m Specification NO. KBS 7.10 / 7.12 Page No. 31 / Item No. 7.5/ PWD SR 2015-16	Sqm							
		5	1	3.00		2.50	37.50		
							37.50		
							37.50	3090.96	115911.0
	Basic Rate	2862.00							
	Area Weightage @ 8%	228.96							
	Total	3090.96							
52	Providing R.O. Plant								
	Providing revsrse osmosis system to cover 2000 Liters of High TDS water per hour								
	TECHNICAL SPECIFICATIONS								
	Flow Rate:								
	Feed Water : 5000 LPH								
	Treated Water : 3000 LPH								
	Reject Water : 2000 LPH								
A	RAW WATER PUMP								
	Purpose:- To feed the Dual Medial filter at pressure more than 2.00 bars which is min operating pressure for filter?								
B	SAND MEDIA FILTER								
	Purpose:- To remove the total suspendred solids, dirt, iron and reduce silt density index which can foul the members								
C	ACTIVATE CARBON FILTER								
	Purpose:- To remove the total color, smell, odor from the water.								
	Media: Mixed bed sand media consisting of the following i) Gravel ii) Pebbles iii) carbon Average porosity 50 micron particulate size bed depth : 1500 mm pipelines & Accessories : Pipe of PVC 10 Bar tested pressure testing cock & pressure gauges at intlet - outlet of system								
	DOSING SYSTEM								
	Purpose : To dose anti scaling chemical to protect the scaling formation on RO Membranes								
D	MICRON FILTER								
	Purpose : To remove the fine particles ip to 05 microns and reduce silt density levels to acceptable level.								
E	HIGH PRESSURE PUMP								
	Purpose : To feed the reverse Osmosis membrane at pressure more than the osmotic pressure taking into consideration flux rate, flow and recovery								
	RO membrane housing.								
	Purpose : To pack membrane and operate at high pressure.								
	RO MEMBRANES								
	Purpose : To remove the major part of TDS into 98% by Reverse Osmosis Membranes arranged and designed to give adequate flow the Recovery.								

	RO CLEANSING SYSTEM								
F	ELECTRICAL PANEL								
	Purpose : A control panel is provided as a safety measure for the pumps & other electrical items.								
	Specifications a) Complete starters, overload relays, b) Voltmeter, Ammeter, MCB's indicating lights, c) Rocker switches for Dozers, d) incomers, Auto-Manual switches.								
	INSTRUMENTATION								
	Purpose : a) Flow meter : To measure the online flow of water flowtec b) Low pressure switch : To protect RO pump from dry running c) High pressure switch : To protect RO pump from back pressure d) Pressure Gauges : For calculate AP for each unit in RO system								
	PH DOSING SYSTEM								
	Purpose to dose sodium Bi-carbonate for enhances product water SS till the pre-filteration & SS from HPP to thhe premeter line termination point NRV's pressure relief valves, wherever needed the system will be on common SS base frame supply & manufacture of complete Reverse Osmosis plant stainless steel tank (2kl) Raw water tank (5kl) with stainless steel pipe line required for plant erection.	Nos							
		5	1				5.00	515000	2575000.0
	ELECTRIFCATION								
53	Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using 1100V grade, COPPER conductor flexible multistrand FRLS PVC insulated, 2 X1.5Sq.mm Cable confirming to the GTP, with a 6Amps flush type SP control switch shall be fixed on the existing plastic sheet / gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. GROUP A (Page No. 05, Item No.2.1 KPWD SR 2014-15								
	b) Medium point above 3Mtr upto 6Mtr from tapping point to out let via switch	Point	2	5			10.00	245.0	2450.0
	c) Long point above 6Mtr upto 10Mtr from tapping point to out let via switch	Point	2	5			10.00	363.0	3630.0
54	Supplying and flush mounting teak wooden box without front plank, made of not less than 12mm thick wood, after due groove cutting, Finishing with necessary cement plastering complete (Page No. 03, Item No. 1.6) KPWD SR 2014-15								
	(1.6.5) 4"x4"x3" (101x101x76mm)	Each	12	5			60.00	68.0	4080.0
	(1.6.1) 12"x12"x3" (300x300x76mm)	Each	6	5			30.00	116.0	3480.0
	(1.6.3)10"x7"x3" (254x178x76mm)	Each	6	5			30.00	87.0	2610.0
55	Supplying 4mm thick plastic sheet with necessary nitches for fixing switches, regulators etc., and fixing on existing wooden or metal box using N.F. screws. (Page No. 17, Item No. 3.9) KPWD SR 2014-15	SqCM							
			5	6666.66			33333	0.3	8333.0
56	Extra for Groove cutting in brick wall/CC floor to the suitable depth for concealing of Conduit/GI pipe and plastering, finishing upto wall surface complete. upto 50mm conduit in brick wall (Page No. 03, Item No.1.7.1) KPWD SR 2014-15	Mtr							
			5	10			50.00	21.0	1050.0

57	Supplying heavy gauge PVC Conduit Pipe 19/20 mm dia 2 mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering up to the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary. (Page No. 02, Item No. 1.3.1) KPWD SR 2014-15	Mtr							
			5	10			50.00	56.0	2800.0
58	Supplying and fixing PBBC/Bakelite straight or slant batten holder and wiring with 60w/230 volts lamps. (Page No. 20, Item No. 4.2) KPWD SR 2014-15	Each							
			10				10.00	88.0	880.0
59	Supplying patti type fluorescent tube light fitting of 2' - suitable for 14 watts fluorescent tube fitting, made out of M.S. Sheet and stove enameled with HF Electronic Ballast , locking type brass contact holders mounted on double fold type sheet base fully wired for use on 230 volts AC . Supply including T5 lamp. (Page No. 20, Item No. 4.5) KPWD SR 2014-15	Each							
			20				20.00	591.0	11820.0
60	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand Copper with low conductor resistance single core wire in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP -A 1.5 sqmm (Page No. 06, Item No. 2.5.2) KPWD SR 2014-15	Mtr							
			5	5			25.00	18.6	465.0
61	Supplying and fixing cast Aluminum round or oblong type bulk head fitting with GI wire guard, glass cover with 60/100 watts 230V GLS lamp. (Page No. 20, Item No. 4.3) KPWD SR 2014-15	Each							
			20				20.00	747.0	14940.0

62	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia (Page No. 55, Item No. 7.1) KPWD SR 2014-15	No	5				5.00	2727.0	13635.0
							Total Construction Cost		7250672.000
63							Cost towards Preparation of DPR LS		72507.00
64							Cost towards PMC / Third Party inspection LS		72507.00
65							Cost towards BESCOM deposite Charges for Borewell LS		60000.00
66							Cost towards BESCOM deposite Charges for RO Plant LS		40000.00
								Sub Total	7495686.00
67							Miscellaneous and rounding off		4314.00
								Total	7500000.00

Certificate.

1 The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2 The provisions made in the estimate are necessary and essential.
3 The workspot was inspected and work is found to be necessary.
4 The area comes within the Bruhat Bangalore Mahanagara Palike limits.

Tejus Consultants

Assistant Engineer
ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

Assistant Executive Engineer
ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ., ಬೆಂಗಳೂರು-24

Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Construction of Bangalore One Centre Building at R.K. Hegdenagar and Dasarahalli in ward No 06, Thanisandra, Byatrayanapura Sub Division.

Est Cost: =20.0Lakh

Sl. No.	Description of work	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
1	KSRB 2-2.1 : Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in ordinary soil not exceeding 1.5 m. in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50 m. after breaking of clods complete as per specifications. specification. No. KBS 2.1(a) / 2.3.5 (Page no -5, item no - 2.3)								
	Bangalore One								
	Footings	2	8	1.30	1.30	1.50	40.56		
	Plinth Beam	2	1	26.70	0.20	0.50	5.34		
	Total Qty	**Cum**					**45.90**	**204.12**	**9369.11**
2	KSRB 2.14-1: Extra for additional lift of 1.5m. or part thereof for excavation In loose / soft or hard soil including cost of materials, labour complete as per specifications. (Page no -7, item no - 2.21)								
	Bangalore One								
	Footings	2	8	1.30	1.30	1.00	27.04		
	Total Qty	**Cum**					**27.04**	**218.16**	**5899.05**
3	Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892cum and fine aggregates @ 465 cum machine mixed, machine mixed,concrete laid in layers not exceeding 15 cms, thick well compacted, in foundation and plinth, including cost of all material, labour HOM Machinery curing complete as per specification,(Page. No. 12 Item No. 4.2								
	Bangalore One								
	Footings	2	8	1.30	1.30	0.15	4.06		
	For Plinth Beam	2	1	26.70	0.20	0.15	1.60		
	Total Qty	**Cum**					**5.66**	**5449.68**	**30834.29**
4	KSRB 4-6.1 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specificaitons. Specification No. KBS 4.6.2(Page No : 15, item No : 4.28)								
	Bangalore One								
	Footings	2	8	4.80		0.45	34.56		
	Total Qty	**Sqm**					**34.56**	**249.48**	**8622.03**

5	KSRB 4-6.4 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for vertical surface such as walls at any thickness, including attached pilasters, buttresses, plinth cills and string courses cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2(Page No : 15, item No : 4.31)								
	Bangalore One								
	For Plinth Beam	2	2	26.70		0.30	32.04		
	Total Qty	**Sqm**					**32.04**	**316.44**	**10138.74**
6	KSRB 4-6.5 : Providing and removing centering, shuttering, strutting, propping etc., for columns, pillars, post and struts, square / rectangular/ polygon in plan including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2 (Page No : 16, item No : 4.32)								
	Bangalore One								
	Columns	2	8	1.10		4.90	86.24		
	Total Qty	**Sqm**					**86.24**	**395.28**	**34088.95**
7	KSRB 4-6.2 : Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for suspended floors, landings, balconies and likes, thickness upto 200 mm including cost of all materials, labour complete as per specificaitonsupto 3.50m from ground level. Specification No. KBS 4.6.2(Page No : 15, item No : 4.18)								
	Bangalore One								
	Roof Slab	2	1	5.35	8.00		85.60		
		2	1	5.35	0.90		9.63		
	Total Qty	**Sqm**					**95.23**	**338.04**	**32191.55**
8	KSRB 4-6.7 :Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for sides and soffits of beams, beam haunchings, cantilever girders, bressumers and lintels not exceeding 1m in depth including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2(Page No : 16, item No : 4.34)								
	Bangalore One								
	Lintel	2	2	26.70		0.15	16.02		
	Roof Beam	2	2	35.80		0.45	64.44		
	Total Qty	**Sqm**					**80.46**	**276.48**	**22245.58**
9	KSRB 4-6.10 :Providing and removing centering, shuttering, strutting, propping etc., for chajjas, corbels etc., including edges including cost of all materials, labour complete as per specifications. Specification No. KBS 4.6.2(Page No : 16, item No : 4.37)								
	Bangalore One								
	Chajja	2	8	1.40	0.90		20.16		
	Total Qty	**Sqm**					**20.16**	**291.60**	**5878.66**

10	KSRB 4.2.2 : Providing and laying in position reinforced cement concrete of Design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregtes @ 0.460 cum, with super plasticisers @ 3 liters confirming to is 9103-1999 reafirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls, return walls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (Page No : 13, item No : 4.11)								
	Bangalore One								
	Footings	2	8	1.20	1.20	0.45	10.37		
	Columns	2	8	0.20	0.35	4.90	5.49		
	For Plinth Beam	2	1	26.70	0.20	0.30	3.20		
	Total Qty	**Cum**					**19.06**	**6491.88**	**123735.23**
11	KSRB 4.2.8: Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates @ 0.46cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintles, and beams retaining walls, return walls, walls (any thickness) including attached plasters, columns, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6. (Page No : 14, item No : 4.13)								
	Bangalore One								
	Lintel	2	1	26.70	0.20	0.15	1.60		
	Roof Beam	2	1	35.80	0.20	0.45	6.44		
	Roof Slab	2	1	4.95	7.60	0.15	11.29		
		2	1	5.35	0.90	0.15	1.44		
	Total Qty	**Cum**					**20.78**	**6650.64**	**138177.02**
12	KSRB 4.2.10 : Providing and laying in position reinforced cement concrete of design mix M20 with OPC cement @ 24kgs, with 12mm and down size graded granite metal coarse aggregates @0.05175cum and fine aggregtes @ 0.0345cum, with superplastisiser @0.225lts, machine mixed, well compacted for plain chajja of 7.5 cms. average thickness, upto ground floor level, including cost of all materials, labour, HOM of machinery, finishing, curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6 (Page No : 14, item No : 4.19)								
	Bangalore One								
	Chajja	2	8	1.40	0.90		20.16		
	Total Qty	**Sqm**					**20.16**	**492.48**	**9928.40**
13	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3 - TMT bars Fe 500 (Page No : 17, item No : 4.46.2)								
	Bangalore One								

	120kg/cum for Footings			10.37	120.00		1244.16		
	150kg/cum for Columns			5.49	150.00		823.20		
	120kg/cum for Beams			6.44	120.00		773.28		
	100kg/cum for Slabs			12.73	100.00		1273.05		
	80kg/cum for Plinth, Lintel and Chajja			6.42	80.00		513.50		
							4627.19		
	Total Qty	**Tonne**					**4.63**	**75081.60**	**347417.13**
14	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto SO m. and lift upto 1.S m. including cost of all labour complete as per specifications. specification. No. KBS(Page No : 6, item No : 2.10)								
	Bangalore One								
	Around Footings	2	8	1.30	1.30	2.40	64.90		
	Deduct Columns	2	-8	0.20	0.35	2.40	-2.69		
	Total Qty	**Cum**					**62.21**	**137.16**	**8532.45**
15	KSRB 5-11 : Providing and constructing load bearing wall with solid concrete blocks of size 400x200x200 mm having block density not lessthan 1800 kg/m3 and having a minimum average compressive strength 5.00 N/mm2 confirming to IS 2185 (Part) : 2005 and constructed with CM 1:4 , as per IS 2572:2005 including cost of all materials, labour charegs, scaffolding, curing complete as per specifications. KBS No.5.4(Page No :25, item No : 5.27.1)								
	Bangalore One								
	Walls	2	1	26.70		2.65	141.51		
	Parappet Wall	2	1	28.50		1.20	68.40		
	Deduction for openings								
	Door D	2	-1	1.50		2.10	-6.30		
	Window W	2	-8	1.20		1.20	-23.04		
	Total Qty	**Sqm**					**180.57**	**1011.96**	**182729.62**
16	KSRB15-3.10 : Providing 20mm thick cement plaster in single coat with cement mortar 1:6, to stone masonry & concrete surface including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.(Page No :114, item No : 15.20)								
	Bangalore One								
	External Walls	2	1	26.70		3.15	168.21		
	Parappet Wall	2	1	26.70		0.90	48.06		
	Deduction for openings								
	Door D	2	-1	1.50		2.10	-6.30		
	Window W	2	-8	1.20		1.20	-23.04		
	Total Qty	**Sqm**					**186.93**	**224.64**	**41991.96**
17	KSRB 15.3.2 Providing 12mm thick cement plaster in single coat with cement mortar 1:4, to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications..(Page No.113, Item No.15.10)								
	Bangalore One								
	Internal Plastering	2	1	25.10		3.00	150.60		
	Total Qty	**Sqm**					**150.60**	**178.20**	**26836.92**

18	KSRB15-3-13 : Providing 12mm thick cement plaster in single coat with cement mortar 1:3, to ceiling including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications..(Page No.114, Item No.15.21)									
	Bangalore One									
	Ceiling	2	1	4.95	7.60		75.24			
		2	1	4.95	0.90		8.91			
	Total Qty	**Sqm**					**84.15**	**208.44**	**17540.23**	
19	KSRB 15.10.2 Providing white washing for every one additional coat with lime of approved quality, to give an even shade including cost of materials, labour, complete as per specifications. (Page No. 115, Item No. 15.39)									
	Same As Internal and Ceiling Plastering Qnty									
	Total Qty	**Sqm**					**150.60**	**4.32**	**650.59**	
20	KSRB 15.10.4 Providing white washing to ceiling and / or sloping roof surface with additional one coat with lime of approved quality, to give an even shade including cost of materials, labour, complete as per specifications.(Page No. 115, Item No. 15.41)									
	Same As Internal and Ceiling Plastering Qnty									
	Total Qty	**Sqm**					**84.15**	**4.32**	**363.53**	
21	KSRB 15-16.1 : Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to give an even shade after throughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications. - with primer. (P. No. 118, I.No. 15.53.2).									
	Same As External Plastering Qnty									
	Total Qty	**Sqm**					**186.93**	**90.72**	**16958.29**	
22	Providing and applying two coats with Plastic emulsion paint of approved brand wall surface to a give an even approved shade after throuughly brushing the surface,free from mortar drops and other foreign matter, including priming , including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications,with primer. (Page No : 117, item No :15.51.2)For internal walls.									
	Same As Internal Plastering Qnty									
	Total Qty	**Sqm**					**150.60**	**97.20**	**14638.32**	
23	Providing and applying two coats with Plastic emulsion paint of approved brand wall surface to a give an even approved shade after throuughly brushing the surface,free from mortar drops and other foreign matter, including priming , including preparing the surface even and sand paper smooth, cost of materials, labour, complete as per specifications,with primer. (Page No : 117, item No :15.51. 2 & 3) for ceiling									
	Same As Ceiling Plastering Qnty									
	Total Qty	**Sqm**					**84.15**	**101.52**	**8542.91**	

24	Providing vitrified tiles 60 x 60cms of approved make, shade and size for flooring laid on a bed of 12mm thick cement mortar 1:3 mix, flush pointing with white cement using colour pigment, including cost of materials, labour, curing complete as per specification. (Page No : 107, item No :14.45)								
	Internal Floor Area	2	1	5.00	5.00		50.00		
	Total Qty	**Sqm**					**50.00**	**1200.96**	**60048.00**
25	KSRB 14-17.2 : Providing skirting, dado, rises of steps with colour glazed tiles on 10mm thick cement plaster 1:3 and jointed with white cement slurry over rough plaster surface (excluding cost of rough plastered surface which should be measured and paid separately) using glazed tiles of approved make and size including cost of materials, labour, complete as per specifications. Specification No.KBS 14.16, 14.17 - Colour glazed tiles 30x60 cms 6mm thick with border of size 30 x 10 cms. (P.No.106, I.No. 14.41.2)								
	Bangalore One								
	Skirting	2	1	25.10		0.10	5.02		
	Total Qty	**Sqm**					**5.02**	**1602.72**	**8045.65**
26	KSRB 9.4-2 : Providing Honne wood frames of doors, windows, clerestory windows, ventilators and other frames, wrought, framed or assembled including making plaster groves (excluding cost of cement concrete and side clamps), but including cost of materials, labour, HOM of machineries complete as per specifications. Specification No. KBS 9.33 (Page No : 51, item No :9.11)								
	Bangalore One								
	Door D	2	1	7.20	0.125	0.125	0.23		
	Total Qty	**Cum**					**0.23**	**111083.40**	**24993.77**
27	KSRB 9.5-2 : Providing and fixing in position fully panelled Honne wood shutters for doors, styles and rails of 40mm. thick with bottom and lock rails 180mm wide top rail and styles 100mm wide as per drawing and panels of 25mm thick including cost of materials, labour, HOM of machineries complete as per specifications. (excluding cost of fixtures) Specification No. KBS 9.34 (Page No : 51, item No :9.15)								
	Bangalore One	2	1	1.50	2.10		6.30		
	Total Qty	**Sqm**					**6.30**	**5014.44**	**31590.97**
28	KSRB 7.9:Providing and fixing .S.gill work for windows and ventilators using M.S.flats, or M.S. square rods, or combination of M.S.flats and square rods as per approved design, drawing including cutting steel sections and welding the same to required pattern with a coat of red lead primer, cost of materials, fixtures, labour and HOM of machinery complete as per specifications. Specification No. KBS 7.12 . (Page No : 32, item No :7.9)								
	Bangalore One								
	Window W	2	8	1.20		1.20	23.04		
	at 21kgs/sqm						483.84		
	Total Qty	**Kgs**					**483.84**	**84.24**	**40758.68**

29	KSRB 7.10 : Providing and fixing in position aluminium windows and ventilators as per approved drawings with sliding shutters using double track window frame section of size 61.85x31.75mm. with 1.2mm thick, bottom section weight 0.695 kg/m, sides and top sections 1.3 mm. thick weight 0.659 kg/m; and shutter comprising top and bottom section of size 40mmx18mm, 1.25mm thick 0.417 kg./m; shutter outer side 40mmx18mm, 1.25mm.thick weight 0.417 kg/m, shutter interlock section 40mmx26.7mm, 1.1mm thick, weight 0.469 kg/m. the shutters mounted on nylon rollers with approved quality of fixtures such as aluminium handles tower bolts etc.; and providing and fixing 5.5mm. thick plain glass for shutters fitted with rubber beading aluminium sections including cutting to required length, joints mitred subdividing the frame tenonned and rivetted in the assembled frame stiffened with end clips at corners angles etc., and fixed to the walls, lintels, floor beams/cills as the case may be with necessary steel screws, raul plugs, or teak wood gatties including cutting masonry or concrete and making good the original surface using cement mortar, aluminium sections pretreated for removal of any Specification No. KBS using aluminium section anodized to 12 - 15 microns. (P.No. 301/ I. No. 7.10.1								
	Bangalore One								
	Windows	2	8	1.20		1.20	23.04		
	Total Qty	**Sqm**					23.04	**4123.44**	**95004.06**
30	KSRB 15-17.4 : Applying priming coat over new wood surface and / or wood based surface, after brushing with ready mix enamel priming paint including preparing the surface after thoroughly cleaning oil, grease, dirt and foreign matter, sand papering and knotting ready mix paint including cost of materials, labour, complete as per specifications.(Page. No. 118 Item No. 15.58)								
	Same as Door Qnty								
	Total Qty	**Sqm**					**6.30**	**33.48**	**210.92**

31	Providing and applying painting two coats (excluding priming coat) on new wood surface and / or wood based surface with enamel paint to give an even shade, cleaning the surface of all dirt, dust and foreign matter, sand papering including cost of materials, labour, complete as per specifications.(Page. No. 118 Item No. 15.60.1)								
	Same a priming coat qnty for Door								
	Total Qty	**Sqm**					**6.30**	**90.72**	**571.54**
								TOTAL :	**1358534.12**
32						**Cost towards Electrical Works, Sanitation and Furnitures**			**611340.35**
33						**Cost towards Preparation of DPR LS**			**13586.00**
34						**Cost towards PMC / Third Party inspection LS**			**13586.00**
								Sub Total	**1997046.47**
35						**Miscellaneous and rounding off**			**2953.53**
								Total	**2000000.00**

Certificate.

1. The rates adopted based on the PWD SR, Bangalore circle for year 2016-17.
2. The provisions made in the estimate are necessary and essential.
3. The workspot was inspected and work is found to be necessary.
4. The area comes within the Bruhat Bangalore Mahanagara Palike limits.

For Tejus Consultants

Assistant Engineer
ಸಹಾಯಕ ಅಭಿಯಂತರರು
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ

Assistant Executive Engineer
ಸಹಾಯಕ ಕಾರ್ಯ ನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು-24

Executive Engineer

BRUHAT BANGALORE MAHANAGARA PALIKE

YELHANKA ZONE ELECTRICAL DIVISION

Name of Work:- Providing Sodium Vapour Lights with necessary electrical fittings & timers in ward No 06 Thanisandra, Byatarayanapura Sub Division.

Budget Head .....

Division No..... Estimate No. ..... For Rs. **2500000.00**

Sl.No.	SR Page & SL No	Description of Work	Qty.	Rate Rs.	Unit	Amount
1		LED Street light.Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminare > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection-Min 4KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with	77	18720.00	Each	1441440.00
	26/4.3 5.3	minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & FixtureEfficiency >80lm/w with nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacture. Suitable for B1/B2 Roads as per IS 1944 Part I & Part II.LED Streetlight 65watts				

2	108/17.12	Supplying and Fixing of.....mm dia class A GI pipe bracket up to 2 mtrs long bent at suitable angle and fixing to this bracket 1x40/2x40 watts fluorescent tube street light fitting of all capacities to GI or CI or rail or RCC pole / wall using suitable clamps, bolts, and nuts and wiring using suitable capacity wires. Using 32mm dia G.I.pipe	115	893.00	Each	102695.00
3	12/2.12.1	Wiring for lighting/power circuit using one of PVC insulated 1100v grade stranded **Aluminium** unsheathed wire single core/multi core cable in open or consealed system of wiring. a)4 sqmm.	330	7.50	Each	2475.00
4	5/7.4.5	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A.3.5 core 25 sqmm	120	165.60	Per Mtr	19872.00
5	61/7.8.7	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.In existing trench/duct.25 sqmm to 75 sqmm	120	34.80	Per Mtr	4176.00
6	AR	**Thiristor based single/ Three phase smart street light control and monitoring system** Remotely control and and monitorable smart street light system by using web or mobile application .smart control system has hardware ruggedness over field issues like line cross, line short, lighting and any other irregularities in voltage. It has some features like 1.Remote lighting management.2.Precise lighting turnoff.3.Load ballancing.4.Load power regulation.5.Status tracking. It works on the basis of some of these features 1) Main Control Unit (Mother board) : Handles controlling , data handling and other communication process. 2) Communication unit: GSM/GPRS quad bandwith RS232 interface wireless communication unit 3) Gate Driver Unit: Firing angle controllable board for driving the thyristor 4) Switching Thyristor: SCR 110 AMPS dual thyristor modules for switching 5) Embedded Firmware: Firmware to control , handle , process the data and communicate it wirelessly.6) Metal Enclosure : IP66 weather prof metal enclosure.7) Transformers: Customized step down transformers for various purposes.8) Wiring and other device assembly components.	17	51500.00	Each	875500.00

7	64/7.21.7	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes25 sqmm Long Barrel	45.00	20.59	Each	926.55
		Total				**2447084.55**
					Cost towards Preparation of DPR LS	**24471.00**
					Cost towards PMC / Third Party inspection LS	**24471.00**
					Sub Total	**2496026.55**
					Miscellaneous and rounding off	**3973.45**
					Total	**2500000.00**

CERTIFICATE :-

1. The place was inspected and the work is essential.
2. The provision made in the estimate are adequate and necessary and the work comes in the BBMP limit and is legitimate Charges on the BBMP funds.
3. The estimate is based on KPWD (Ele) S.R.2014-15 & Approved Rates.

Jr/Asst. Engineer (Elec)

Asst. Exe Engineer (Elec)
yelhanka zone
Bruhat Bangalore Mahanagara Palike

EXECUTIVE ENGINEER (ELEC)
YELHANKA ZONE
BRUHAT BANGALORE MAHANAGARA PALIKE

BRUHAT BANGALORE MAHANAGARA PALIKE

Project: Providing Sign Boards in Different Layouts of Ward No 6 Thanisandra, Byatarayanapura Sub Division.

Est Cost: =25.0Lakh

Sl. No.	Description of Item	Unit	No.	Length m	Breadth m	Depth m	Quantity	Rate in Rs.	Amount in Rs.
1	KSRRB M300-1. Earth work excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5m, excavated surface levelled and sides neately dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specification. MORTH / Chapter 3 (P.No.142, I.No.19.1 of PW, P&IWTD SR 2016-17)								
	New Name Boards	Cum	240	0.30	0.30	0.60	12.96		
							12.96	202.92	**2629.84**
2	KSRB 4-1.2: Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.892 cum and fine aggregates @ 0.465 cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No.4.2 of PW,P&IWTD S.R 2016-17)								
	New Name Boards	Cum	240	0.25	0.25	0.30	4.50		
							4.50	5348.76	**24069.42**
3	KSRRB M800-3. Direction and Place Identification Signs upto 0.9 sqm Size Board:- Manufacturing, supply and installation of retro- reflectorised cautionary, mandatory and informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC :67:2012 specifications & fixed over 4 mm thick aluminium composite panel sheet having minimun 0.30 thick aluminium skin on both sides & fixed over a support frame of 25x25x3 mm MS angle and mounted on 75mm dia OR 75x75x6mm Mild steel angle of total height 2.70m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60 cm below ground level. The sign post should be painted with one coat of red oxide paint and white colour with brands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45 cm x45 cm x 60 cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the work as directed by engineer in charge. 10 years warranty for retro reflective sheeting from the original sheeting manufacturer as per clause 6.9 in IRC 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. (P.No.182, I.No.24.3 of PW, P&IWTD SR 2016-17)								
	New Name Boards	Sqm	240	1.00	0.90		216.00		
							216.00	8590.24	**1855491.84**
4	KSRRB M800-7 Painting: Providing and applying two coats of readly mix paint of approved brand after through cleaning of surface to give an even shade complete as per specifications. P.196 It 24.8 (P.No.184, I.No.24.8.1 of PW, P&IWTD SR 2016-17) Painting on Steel Surface								
	New Name Boards	Sqm	480	1.00	0.90		432.00		
	Old Boards		620	1.00	0.90		558.00		
							990.00	60.42	**59815.80**
5	KSRRB M800-10. Painting new letter and figures of any shade with synthetic enamel paint black or any other approved color to give an even shade complete as per specifications English and Roman Hyphen and the like not to be measured and paid for MORTH Specification No.803 P.197 It No.24.10. (P.No.184, I.No.24.10 of PW,P&IWTD S.R 2016-17)								
	New Name Boards	cm	240	580.00			139200.00		
			310	580.00			179800.00		
							319000.00	0.53	**169070.00**

Sl. No.	Description of Item	Unit	No.	Length	Breadth	Depth	Quantity	Rate in Rs.	Amount in Rs.
				m	m	m			
6	Manufacturing, Supply & Fixing of Retro- Reflection Road name sign board single Arrow size 1.98X0.9m size made out if wide angle cube corner micro prismatic grade sheeting confirming to IRC 67:2010 & type XI standards of ASTM D 4956-09 specifications and fixed over 2mm thick aluminium sheet back support frame of stainless stell supported by 30NB 1.2mm thick stainless steel pipe all around and 65NB 1.5mm thick pipe vertical post (AISI 202 Grade) firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 30cmx30cmx45cm etc.complete. The information message shal be made out of cut out letters in blue colour transparent overlay film as per IRC 67-2010 Guidelines, 7 years pre-qualification warranty for retro reflective sheeting from the original sheeting manufacturer and a certied copy of three years outdoor exposure report from an independent test lab for the product offered shall be submitted by the contractor. The sign board shall be Retro-Reflective Type XL								
	Approved Rate	Each	12	--	--	--	**12.00**	28250.00	**339000.00**
								Total Construction Cost	**2450076.900**
7								**Cost towards Preparation of DPR LS**	**24501.00**
8								**Cost towards PMC / Third Party inspection LS**	**24501.00**
								Sub Total	**2499078.90**
9								**Miscellaneous and rounding off**	**921.10**
								Total	**2500000.00**

Certificate.

1. The workspot was inspected and Provisions made in the estimate are adequate and necessary.
2. Work Spot comes under BBMP limits.
3. The estimate based on PWD CSR for the year 2016-17.
4. This work is not split up.
5. These works are not taken up in any other grants and free from Defect Liability Period.
6. Earlier Improvements taken up in the proposed roads are recorded in earlier road history.

For Tejus Consultants

Assistant Engineer

Assistant Executive Engineer

Executive Engineer